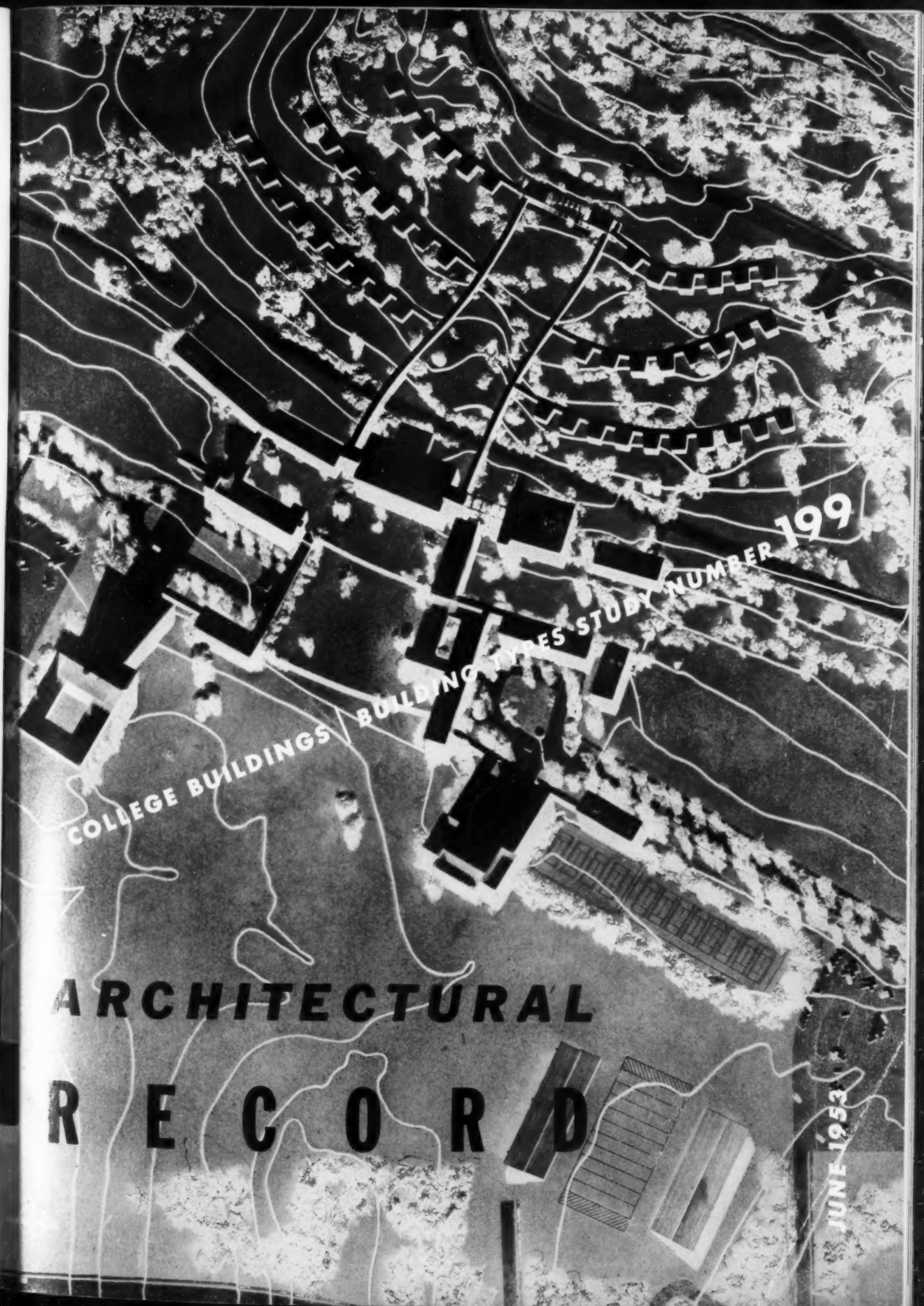
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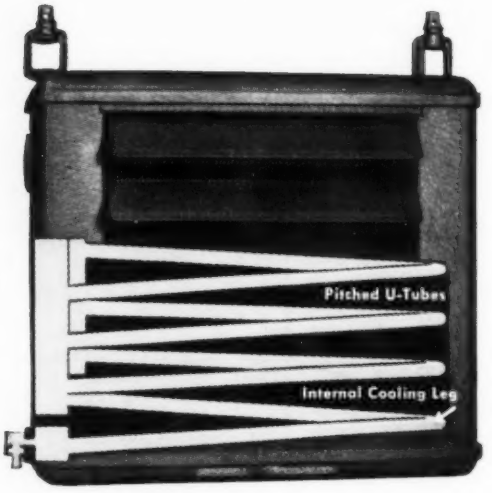

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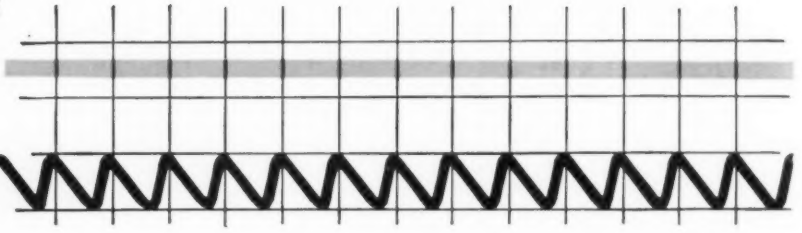

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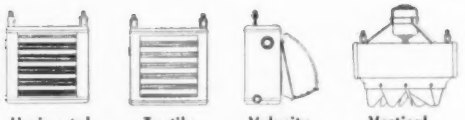

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Site plan: Duluth Campus, University of Minnesota. Winston A. Close, Advisory Architect

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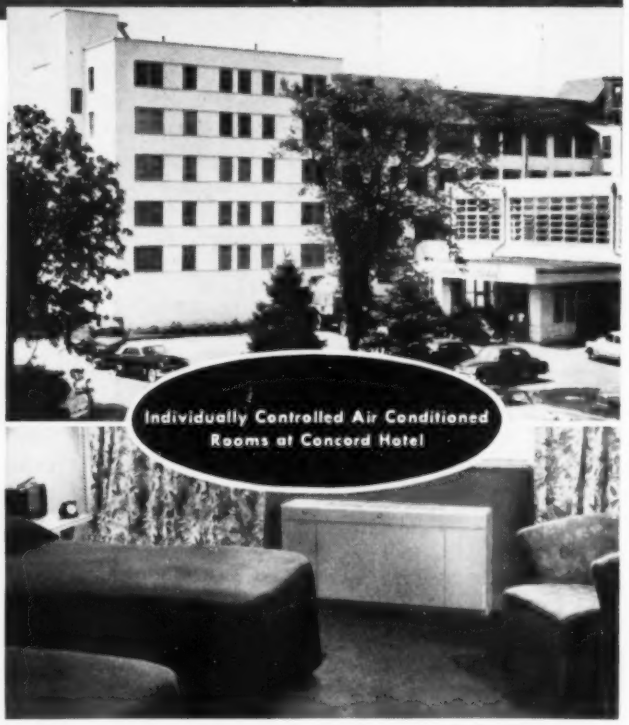
Another interesting REMOTAIRE installation!

Individual-room remote type units in resort hotel provide year 'round air conditioning

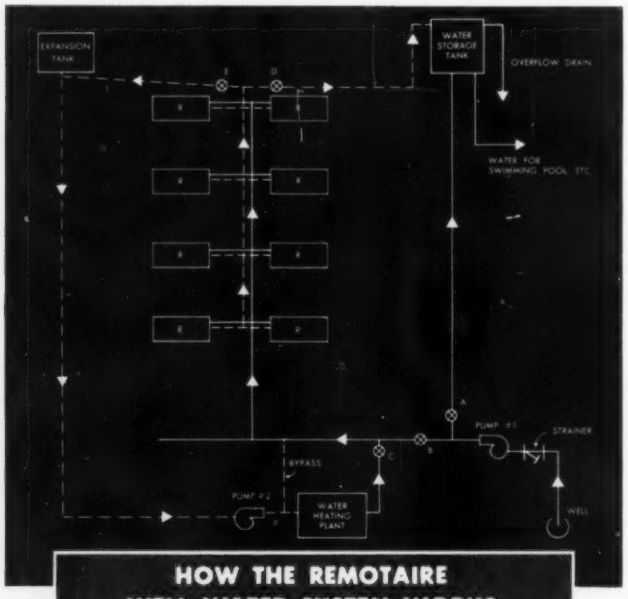
Summer cooling... winter heating



● The Concord Hotel, Kiamesha Lake, New York, found the answer to efficient, economical year 'round air conditioning through the installation of the Remotaire Well Water System—one of a number of different Remotaire systems available for multi-room buildings.

The Remotaire Well Water System may be used in localities where well water is known to be available in adequate supply, proper temperature, and of good quality. The cold well water is used in lieu of a water chilling plant. Consisting of Remotaire Room Units in each room connected by a piping system to the central plant equipment (as shown in the diagram), this system costs less to install and less to operate. Individual control of each Remotaire unit allows the occupant to choose the room temperature that suits him best without affecting adjoining rooms.

This resort hotel installation is another example of the versatility of the Remotaire for hotels, motels, hospitals, apartments, and other multi-room buildings.



HOW THE REMOTAIRE WELL WATER SYSTEM WORKS

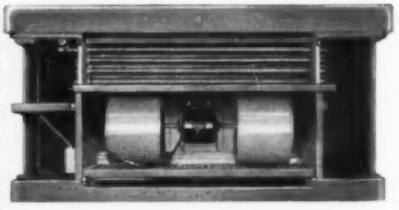
The Remotaire Well Water System consists of Remotaire Room Units in each room connected by a simple piping system to the central plant equipment—a well with pump, water heater, water circulating pump, expansion tank, storage tank and water filter or strainer as shown above.

FOR COOLING—Valves A and C are closed. B is open. Pump No. 1 pumps water from well to Remotaire units on each floor from which it travels thru valve D to storage tank on roof. This water is usable for swimming pool or other purposes.

FOR HEATING—Heating circuit includes Water Heater, Valve C, Valve E, Expansion Tank, Pump No. 2 and bypass. For operation, close Valves B and D, start Pump No. 2 and boiler, and the hot water circulates through the system.

When cooling is not required, well water may be used for other purposes, and can be pumped direct through Valve A to Water Storage Tank by Pump No. 1.

Top Quality Construction... Easy To Install



The Remotaire is sturdily built of heavy-gauge steel—plus a reinforced air grille—with a bonderized, baked-on semi-gloss enamel finish. All air passages are acoustically insulated for thermal efficiency and quietness. Coil is designed for right or left hand connections. Spacious end compartments permit easy access to coil connections and controls. Adaptable to a variety of ventilation systems, the Remotaire is ideal for modernization as well as new construction and is available in three models—200, 400 and 600 cfm.

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THE RECORD REPORTS

PERSPECTIVES

For some years now it has been clear that architecture has been reaching for something new. Having joined, perhaps belatedly, the march of science, architecture has arrived at the universal problem of how to use technology without worshipping it: the discovery that the machine should be servant, not master, to man. How architecture might better serve "the whole man" has been the subject of a series of articles published over the past two years in Architectural Record. While the authors took many different approaches, the following quotations add up to a rather remarkable statement of architecture's new goals.

The Bauhaus did much to break down the eclectic surge. . . . Europe and even America were so overwhelmed with history there was great need of coming clean to structure without a study of history. . . . However, the slavish copying of *new* masters is just as overwhelming, just as suffocating, as that of the *old* masters. — *William Wurster*, Architectural Record, Jan. 1951

Today we are more honest, more practical and quite functional, but it has been at the expense of grace and gentility. We have taken away many of the established forms, so cherished by our ancestors, and have replaced them with stark utilitarian ones, which give little nourishment to the senses. We have taken away from the man in the street all the stereotyped little ornaments, cornices, cartouches, and green fake shutters, but we have not been capable of giving him back the equivalent in emotional value. — *Pietro Belluschi*, Architectural Record, Feb. 1951

In my view, if our contemporary architecture turns out in the long run to have been one of the great cultural achievements of man, posterity will then regard engineering architecture as the primitive stage and functional architecture as the transitional stage. For one more ingredient needs to be added. . . . The ingredient as yet only partially supplied is humanism. — *John Burchard*, Architectural Record, July 1951

The International Style was not presented, in the 1932 book which first gave currency to the phrase, as a closed system; nor was it intended to be the whole of modern architecture, past, present, and future. Perhaps it has become convenient now to use the phrase chiefly to condemn the literal and unimaginative application of the design clichés of 25 years ago; if that is really the case, the term had better be forgotten. The "traditional architecture" which still bulked so large in 1932 is all but dead by now. The living architecture of the twentieth century may well be called merely "modern." — *Henry-Russell Hitchcock*, Architectural Record, Aug. 1951

By now, many architects have become aware of a self-imposed poverty: in absorbing the lessons of the machine and in learning to master new forms of construction, they have, they begin to see, neglected the valid claims of the human personality. In properly rejecting antiquated symbols, they have also rejected human needs, interests, sentiments, values, that must be given full play in every complete structure. This does not mean, as some critics have hastily asserted, that function is doomed; it means rather that the time has come to integrate objective functions with subjective functions: to balance off mechanical facilities with biological needs, social commitments and personal values. — *Lewis Mumford*, Architectural Record, Nov. 1951

Contemporary interest in the core is part of a general humanizing process; of a return to the human scale and the assertion of the rights of the individual over the tyranny of mechanical tools. . . . The lack of imagination usually shown today . . . in our attempts to devise new city centers — new city cores — is invariably excused on the ground that we no longer have a way of life that it is possible to express. What Michelangelo has mirrored in his Area Capitolina is the baffling irrationality of historic events and the enigmatic omission of any direct relation between effect and cause. Once more we realize that a great artist is able to create the artistic form for a phase of future social development long before that phase has begun to take shape. This is our task today! — *Siegfried Giedeon*, Architectural Record, Apr. 1952

"Less is more" unless less, already little, becomes less than nothing at all and "much ado about nothing." — *Frank Lloyd Wright*, Architectural Record, May 1952

Three-dimensional architecture, as every art, is the result of the individual's expression of his beliefs and convictions; if you will, it is his statement of a philosophy. . . . Thus, the work of a creative individual is his handwriting, expressing in some ambition and vanity; in others, the warmth and delight of understanding; in some, harshness and boldness; in others, firmness and grace; in so many, the mediocre; in so few, something that adds more to the integrity and dignity of men. — *Henry Hill*, Architectural Record, June 1952

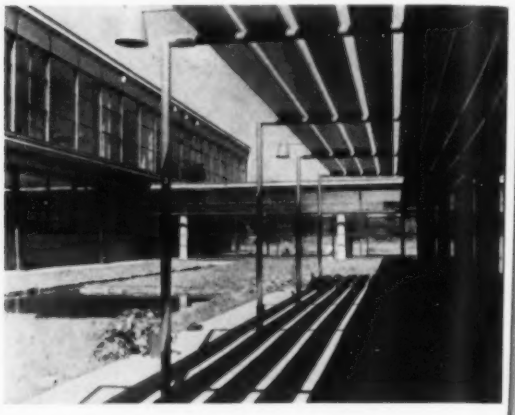
For ours is not an age of maturity, of accepted style. It is a time for relating things, of experiment, of youthful enthusiasm, of much promise. . . . Our buildings inevitably tell our story, haltingly or beautifully. As a chorus they make an incoherent babel that reflects how little our whole society is in accord, but here and there is an architectural statement whose calmness and serenity bespeak a well-adjusted designer who has used the full range of sound and made a building not talk, but sing with full chords. And when he does transcend a thin tinkling tune, it is because his heart was set on a song for many people, not a solo for himself. — *Richard Bennett*, Architectural Record, July 1952

If, in fact, we are witnessing a new departure, then it would be churlish to conclude without paying a tribute to the stern, if sometimes inhibiting, discipline which the Modern Movement imposed. If one thinks as I do that it always remained inextricably confused between ends and means, it nevertheless fulfilled an essential task. As with abstract painting it was not, as some might think, a blind alley but a necessary diversion, and those who passed through are likely to have traveled considerably further than those who stuck to the main road. — *Osbert Lancaster*, Architectural Record, Sept. 1952

The genius in architecture is he who, commanding the means of expression, feels beauty and meaning in the general life of mankind more clearly and intensely than do other men. — *Joseph Hudnut*, Architectural Record, Mar. 1953

c Ezra Stoller

Architecture. Gold Medal: Carl Koch & Associates, for Youth Library (left), Fitchburg, Mass. Silver Medal: Raymond & Rado, for Readers' Digest Building (below), Tokyo. Honorable Mention: Edward D. Stone & Associates, for Art Center (below left), Fayetteville, Ark.



Lionel Freedman

ARCHITECTURAL LEAGUE HONORS NINE IN 56TH ANNUAL

THE ARCHITECTURAL LEAGUE OF NEW YORK, founded in 1881 to encourage collaboration between architecture and the allied arts and communication between their practitioners, this year held its 56th annual Gold Medal Exhibition.

The 1953 program included architecture, landscape architecture, mural decoration, sculpture, design and crafts in native industrial arts and — for the first time as a separate category — engineering. Considering that it is intended to be a national exhibition, open without even an entry fee to all architects and artists in the United States, whether or not they are League members, it was not a very big exhibition — there were only 11 entries in architecture, for example, four in engineering and none in landscape architecture.

Entries in each of the categories are judged by juries of League members drawn from that category. One Gold Medal may be given each year in each field; but when none of the submissions appears to the jury to be of sufficient merit, the Gold Medal in that field may be withheld. In addition, Silver Medals and Honorable Mentions may be given at the discretion of the jury.

This year's awards, all of which are shown on these pages, included three Gold Medals, three Silver Medals and three Honorable Mentions. No Gold Medal was given in sculpture or in design and crafts in native industrial arts.

Lewis P. Watson

Engineering. Gold Medal: Severud-Elstad-Krueger, for North Carolina State Fair Pavilion, Raleigh. Architects: the late Matthew Nowicki and his associate, William Dietrich

Mural Decoration. Gold Medal: George Harding, for murals for Montgomery County, Pa., County Courthouse (one section above) and "creative output throughout the years"

Sculpture. Silver Medal: Moissaye Marans, for his study (above) for Boyertown, Pa., Post Office. Honorable Mention: Thomas Lo Medico, for his group The Apprentice (left)

GOLD MEDAL EXHIBITION

Louis Skidmore, F.A.I.A., of Skidmore, Owings & Merrill, Architects & Engineers, was chairman of the 1953 exhibition. Chairmen of the committees on selection and juries of award were: *mural decoration* — Joep Nicolas; *architecture* — Louis Skidmore; *design and craftsmanship in native industrial arts* — Viggo F. E. Rambusch; *landscape architecture* — Alfred Geiffert III; *sculpture* — Leo Friedlander; *engineering* — Henry F. Richardson.

Design and Crafts in Native Industrial Arts. Silver Medal: Doris Hall, for enamel panel (below) produced at Bettinger Corporation. Honorable Mention: J. Arthur Harriton, Harriton Carved Glass, for glass panel (right) for liner United States

O P I N I O N

Editor, ARCHITECTURAL RECORD:

Herewith is an article which I am sending to the principal architectural magazines of the world . . . I think you should use it as you see fit . . . should be published by you apropos the Hitchcock piece.

Frank Lloyd Wright

Excerpts from

"THE 'INTERNATIONAL STYLE'"

By Frank Lloyd Wright

[Dated February 1953]

THE INTERNATIONAL STYLE IS NEITHER INTERNATIONAL NOR A STYLE. . . .

All ISMS are merely derivative.

An ISM is only a *notion*.

At most the notion becomes a fashion and a Fashion is — always — some passing show of imitation: probably an imitation of a bad imitation by a bad imitator. In any international "style," therefore, we would have more invasion than invention. Though unfortunately serviceable to the commerce of Education as it now runs in this latest propaganda "Post-war Architecture" sold by the Museum of Modern Art, New York, N. Y., I see a cliché for the rising tide of mediocrity. . . .

By way of this pestiferous procession of professionalism there is real harm in internationalism. It poses *a style*. There is no sense at all in *a style* for what should now constitute the free architecture of a Democracy. Not much harm in this tricky little trickle from a museum except that so many people of purely bureaucratic stature who labor under the distinction of being nobody at all are somehow in position to put wrong ideas into the heads of babes and sucklings who don't know Vasari from Vesuvius.

The cognoscenti — European especially — are not affected. They well know that any "International Style" is the degeneration of a good IDEA.

Regarded by whatever creative architecture is left in the world, this substitution of façade for substance is annoying, because it is unenlightened betrayal: recession to the realm of "make believe" in the land of never-never. . . .

Old man BOX merely *looks* different when glassified, that's all. But the more the box is glassed the more it is evident as the box. No new ideas whatever are involved. The old sham front has had its face lifted. What radical change may be seen lies wholly in appearance.

Organic (or intrinsic) architecture abolishes the old post and lintel box, resents and rejects "the slab." Organic-architecture is *a new idea of what constitutes a building*. That idea introduces wholly new values into the building. An entirely new ethic (as esthetic) comes to life when the building is so conceived as *intrinsic*. Wherever it is built you see a new countenance. Organic modern architecture is first of all interior, *of* the thing not *on* it. Not a dead style therefore, but STYLE that bears ever fresh form. A true dissidence and its origin is American.

Back there, in the sinister shadow cast upon modern Organic-architecture at the new Museum of Modern Art, about twenty years ago, this renaming and retiming of old wine in new bottles began. A style might have looked to the museums (then the morgues of Art) like expedient reformation. But this confluence of equivocal minds and circumstances looks like a foolish attempt to do much the same service to American Organic-architecture now that the Chicago World's Fair of '93 did to the modern movement then led by Louis Sullivan. . . .

Tommy Weber

. . . To hitherto convenient "classicism" now, by way of glassicism, do we revert? Whatever best serves our commercially mechanized society or vice versa will do, so far as the profession is concerned. But the people?

This servile recourse to the Machine by a style, this rise of mediocrity now flooding into high places, is our American heartache in architecture. We who love our country believe in the original meaning and intent of our forefathers' "Declaration" and the wisdom of the Constitution they devised. We do not like much of what we see or any of what we read in "Post-war Architecture."

The world in which we now share is not smaller than it used to be because of airships, atom bombs and electrification. The world is larger because more comprehensive and therefore less comprehended by us. There is more confusion of mind now than ever existed before. Far less sympathetic understanding.

As human beings, our view both personal and national, comprises so much we never dreamed of before and do not understand now. What merely existed for us before mechanization set in and this cliché appeared the ideal expedient, is an unsolved problem now.

That does not mean "*one world*" but *many*. Too many maybe (as we are going) because *we are not yet ready with our own!*

If ever international cooperation is to come true the need for solidarity of Individual-independence grows immensely in importance because of easy intercommunication. The strength of our native spirit more necessary to Freedom. . . .

It is the strength of the philosophy of a free intrinsic or organic-architecture that it loves, (and cherishes) these infinitely individual human traditions of the great TRADITION. Because of our increased techniques such architecture could easily afford all nations new means of realization on their own soil along lines of character and development already peculiar to themselves in their own country. Whatever is modern in Architecture should, in this new view of reality which inspired architecture may reveal, intensify the individualities of all nations, not strip them of the charm of innate distinctions. As a nation we have little such or none. If, instead of our own inspired

(*Continued on page 332*)

FOCUS ON SEATTLE: 85TH A.I.A. CONVENTION JUNE 15–19

SEATTLE becomes the architecture capital of the United States this month, as an estimated 2000 delegates, members and guests of the American Institute of Architects converge on the Olympic Hotel in that city for the Institute's 85th annual convention June 15–19.

The first A.I.A. convention ever to be held in the Pacific Northwest will emphasize that area's contributions to American architecture in the convention theme "New Country — New Architecture" and in a combination of tours and seminars designed to explore the relation of the region's vast lumber resources to the art and science of building.

The program, arranged under the over-all direction of Northwest Regional Director Irving Smith of Portland, Ore., as general chairman and Waldo Christenson of Seattle, chairman of the Steering Committee of the Washington State Chapter, host chapter for the convention, will feature, in addition to three seminars on wood tied in with the convention theme, seminars on "Oriental Influences on American Art and Architecture," "Liturgical Arts," and "Condensation in Buildings." There will be special meetings on the home building industry and on civil defense.

Major Speakers Named

Pietro Belluschi, F.A.I.A., who left his Portland, Ore., practice three years ago to become dean of the school of architecture and planning at Massachusetts Institute of Technology, and William M. Allen, president of the Boeing Airplane Company of Seattle, will be the "keynote" speakers. Mr. Allen will open the business sessions on June 16, speaking on "New Country"; "A New Architecture" will be Dean Belluschi's topic at the closing session on June 19. Speaker at the annual banquet on June 18 will be George H. T. Kimble, geographer, meteorologist and since 1950 director of the American Geographical Society, who will relate architecture to the broader study of environment.

Officers to be Elected

New officers will be elected to succeed the present slate, headed by President Glenn L. Stanton of Portland, Ore., which has completed the usual two one-year terms. Kenneth L. Wischmeyer of St. Louis, the present first vice president, and Clair W. Ditchy of Detroit, the present secretary, are both candidates for president. Four regional directorships also fall vacant this June.

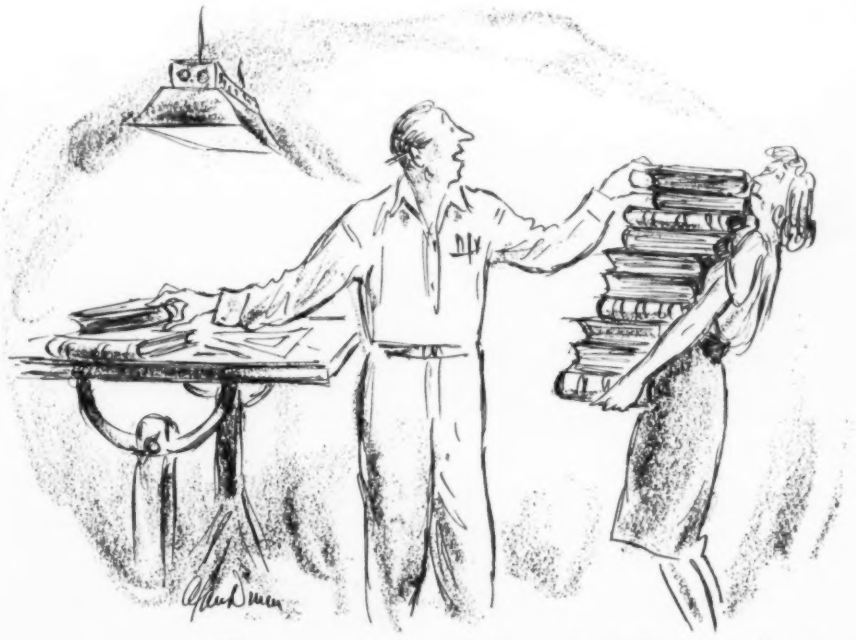
Honors Listed

Awards and honors to be conferred at the 85th convention include the 1953 A.I.A. Gold Medal, to William Adams Delano, F.A.I.A., of Delano and Aldrich, New York architectural firm; the Fine Arts Medal, to Sculptor Donal Hord of San Diego; the Craftsmanship Medal, to Emil Frei, stained glass artisan, of St. Louis; and the Edward C. Kemper Award (for service to the Institute) to Gerrit J. de Gelleke, F.A.I.A., of Milwaukee. Honorary memberships will be awarded to Gurdon M. Butler of Tucson, Ariz., dean emeritus of the University of Arizona's College of Engineering, and Frank Creedon, director of installations for the Department of Defense. Thirty A.I.A. members will be advanced to Fellowship in the Institute (ARCHITECTURAL RECORD, May 1953, page 12).

Exhibits will include entries in the A.I.A.'s Fifth Annual Program of National Honor Awards; the Producers' Council display of building materials and equipment of 53 manufacturers chosen for "design quality and interest to architects"; examples of the work of the Fine Arts and Craftsmanship Medal winners; and examples of the architectural work of the new Fellows.

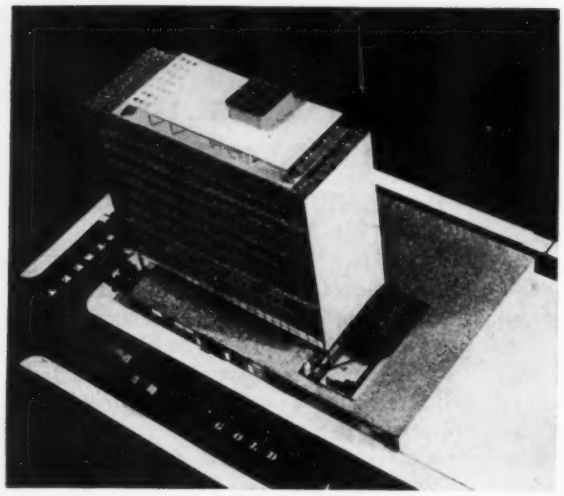
Among the scheduled pre-convention meetings are sessions of the National Council of Architectural Registration Boards, the Association of Collegiate Schools of Architecture, the Producers' Council and the Board of Directors of the A.I.A. A major convention feature will be an all-day "logging tour" on June 15 to the Olympic Peninsula across Puget Sound from Seattle as guests of the Simpson Logging Company.

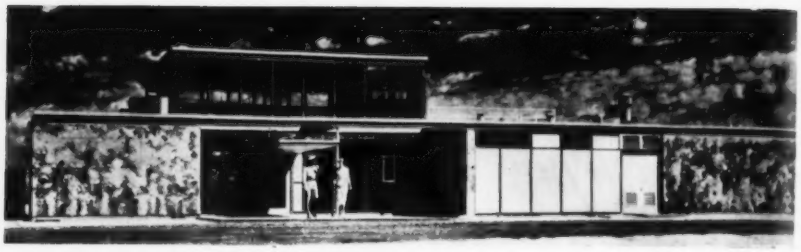
Under the auspices of the United States Travel Agency, Inc., "convention special" trains are being run to provide scenic trips to and from Seattle with Chicago as a starting point. Post-convention tours to Hawaii (by air) and Alaska (by steamship) are also being offered.



—Drawn for the RECORD by Alan Dunn

"Don't worry, Miss Roberts—I figured out that you had a psi of 268.25 pounds—"





Three entries from the Albuquerque firm of Flatow & Moore were among 12 award winners in A.I.A. Western Mountain District exhibit. Left: Simms Building, Albuquerque, first award in commercial category; above: Airport Terminal Building, Farmington, N. Mex., second in commercial group; below: Intermediate School, Los Alamos, first award in school category

WESTERN ARCHITECTS MEET—12 BUILDINGS CITED

SOME VERY DOWN-TO-EARTH SUBJECTS were the meat of a very popular program at the second annual regional convention of the Western Mountain District of the American Institute of Architects. The three-day session was held in April at Colorado Springs.

Public relations for architects and the A.I.A. Standardized Accounting System were the subjects of the two main seminars, both of which produced some very intensive question-and-answer sessions. Speakers were Walter M. Megronigle, manager of the public relations division of Ketchum, Inc., Pittsburgh firm which is directing the national A.I.A. public relations program, and David C. Baer of Houston, chairman of the A.I.A. Committee on Office Practice and Accounting.

Eduardo Contini, director of engineering for Victor Gruen Associates, Los Angeles, and Roger Allen of Grand Rapids were other speakers. W. Gordon Jamieson, regional director, presided at two business sessions.

Aside from the program, major interest centered in the regional exhibit and the awards announced at the meeting. Max Flatow, whose firm, Flatow & Moore, won three of the 12 awards, was named "Architect of the Year."

The award-winning buildings, by categories, and their architects:

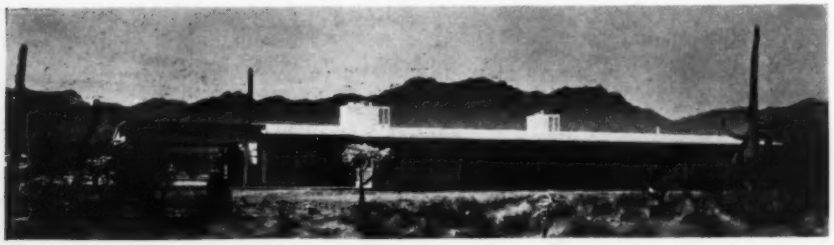
***Commercial*—First, Simms Building, Albuquerque, Flatow & Moore; second, Airport Terminal, Farmington, N. Mex., Flatow & Moore; third, Boulder, Colo., City Hall, James Hunter.**

***Residential*—First, Mrs. R. H. Winsor house, Tucson, Arthur T. Brown; second, King house, Boulder, James Hunter; third, house, Albuquerque, Ferguson & Stevens.**

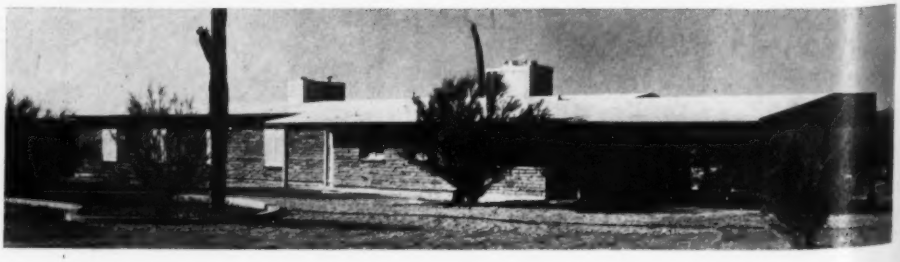
***Schools*—First, Intermediate School, Los Alamos, Flatow & Moore; second, Pueblo, Colo., School, Edward L. Bunts; third, Church school, Walter de Mordaunt, Pueblo, Colo.**

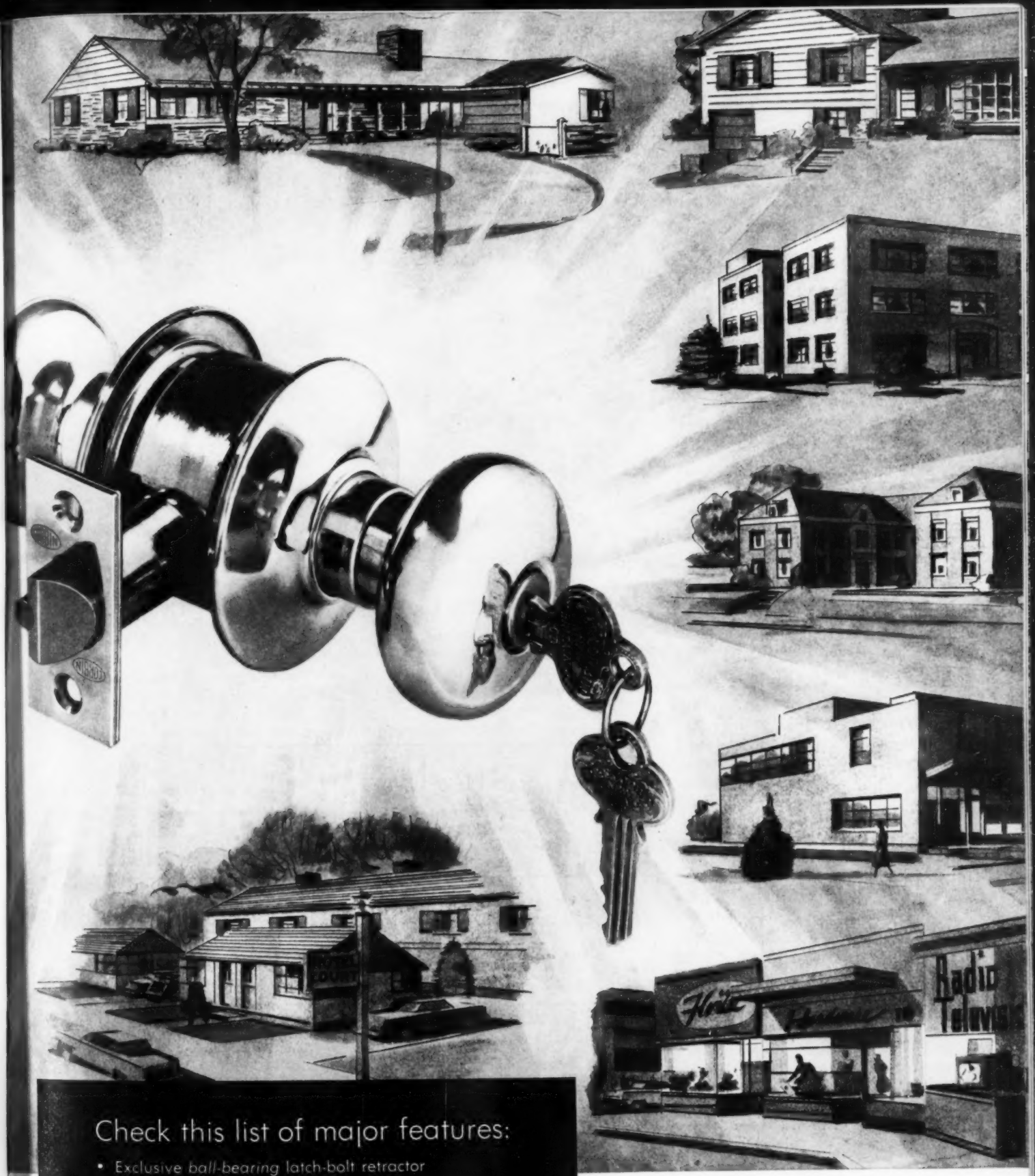
***Institutional other than schools*—First, St. Timothy's Evangelical Lutheran Church, Ferguson, Stevens & Associates; second, Colorado A.&M. dormitory (project), James Hunter; third, Aurora Library (project), Victor Hornbein.**

St. Timothy's Evangelical Lutheran Church (right) won for Ferguson, Stevens & Associates of Albuquerque the first award among institutional buildings other than schools



First in the fourth category—residential—was this house for Mrs. R. H. Winsor; Arthur T. Brown, Tucson, architect





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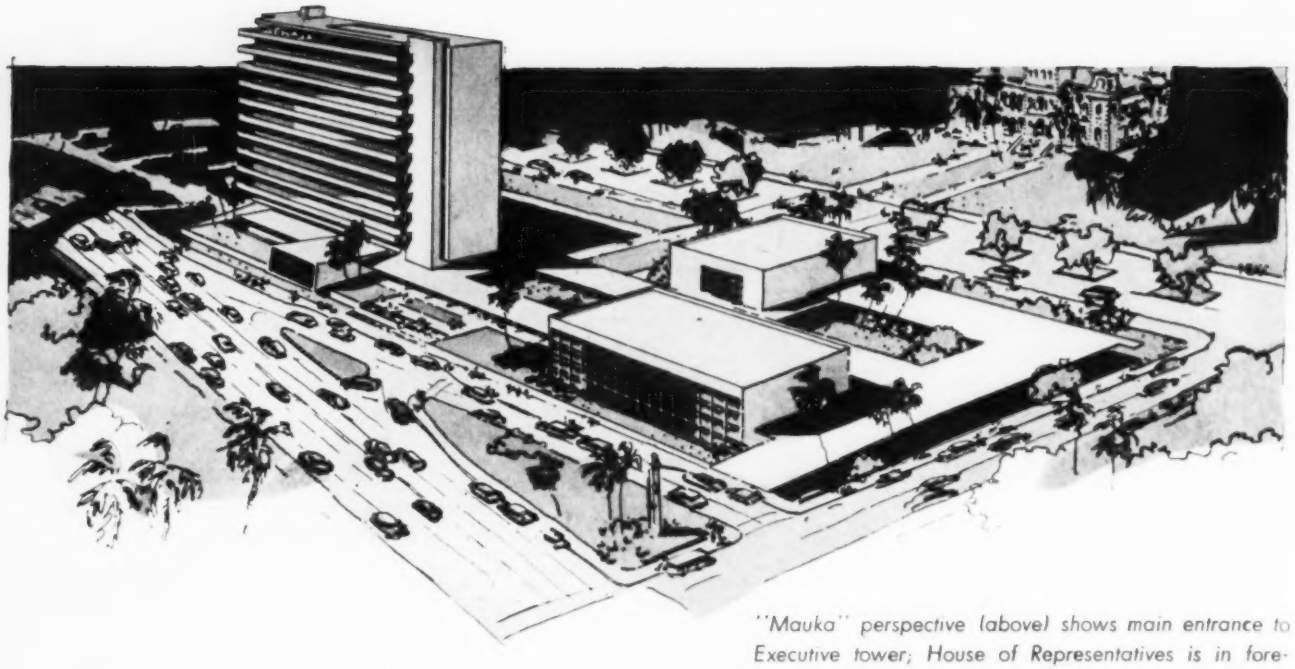


"Mauka" perspective (above) shows main entrance to Executive tower; House of Representatives is in foreground, Senate behind it. Below: drawings show plan of typical office floor and section of Executive unit

HAWAII PLANS EXECUTIVE AND LEGISLATIVE BUILDING

Architecture for Statehood: Proposals for Expanded Capitol Grounds

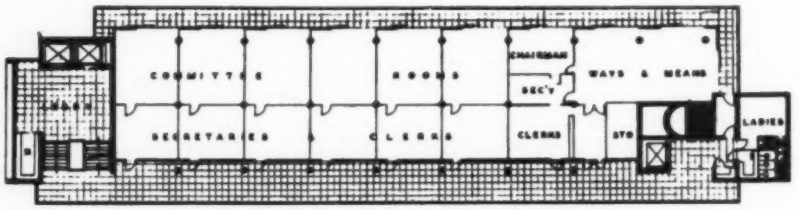
Would Also Preserve Historic Iolani Palace and Iolani Barracks

THE TERRITORY OF HAWAII may become the 49th state before this session of Congress adjourns; and if that long-heralded event occurs, it will find the Territory's planners ready with proposals for an expanded Capitol Grounds and a new Executive and Legislative Building to replace historic Iolani Palace as the Capitol.

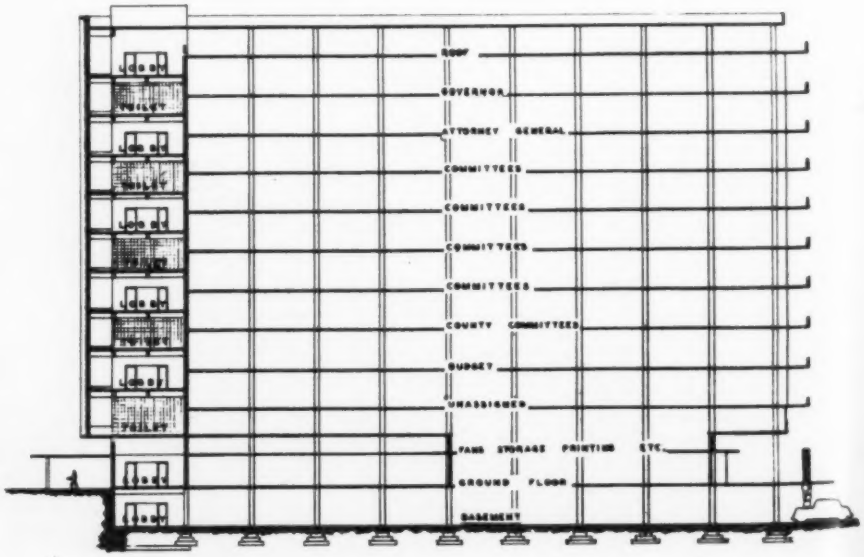
The preliminary plans for the building, as prepared by Merrill, Simms & Roehrig-Ossipoff-Heen, Associated Architects, provide for four main elements — the Senate, the House of Representatives, auxiliary offices for the two chambers, and an Executive Office tower. The multistoried form for the executive unit was adopted to preserve a maximum of open area for Capitol grounds. The Senate, the House and their special offices would surround a private garden court for the legislators. The four units would be connected by broad lanais.

All construction is to be earthquake-resistant and fireproof, finishes of native stone and hardwoods.

The 350,000-sq-ft site, originally selected for the project on the Master Plan and Honolulu Civic Center Plan adopted in 1945, would include and preserve in the new Capitol Grounds historic Iolani Palace, the Archives, Iolani Barracks and the Library of Hawaii.



8TH FLOOR



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Valve sizes shall be determined by control manufacturer for capacities specified. Type of valve body and valve top to be used shall be as required to best satisfy the application.

Valves shall be equipped with phosphor bronze bellows or Neoprene diaphragms of sufficient size to close off against specified line pressures. Diaphragms shall be replaceable. Valves shall be equipped with characterized throttling plugs to insure a measured flow of steam or water in direct relationship to the demand of the controlling thermostat.

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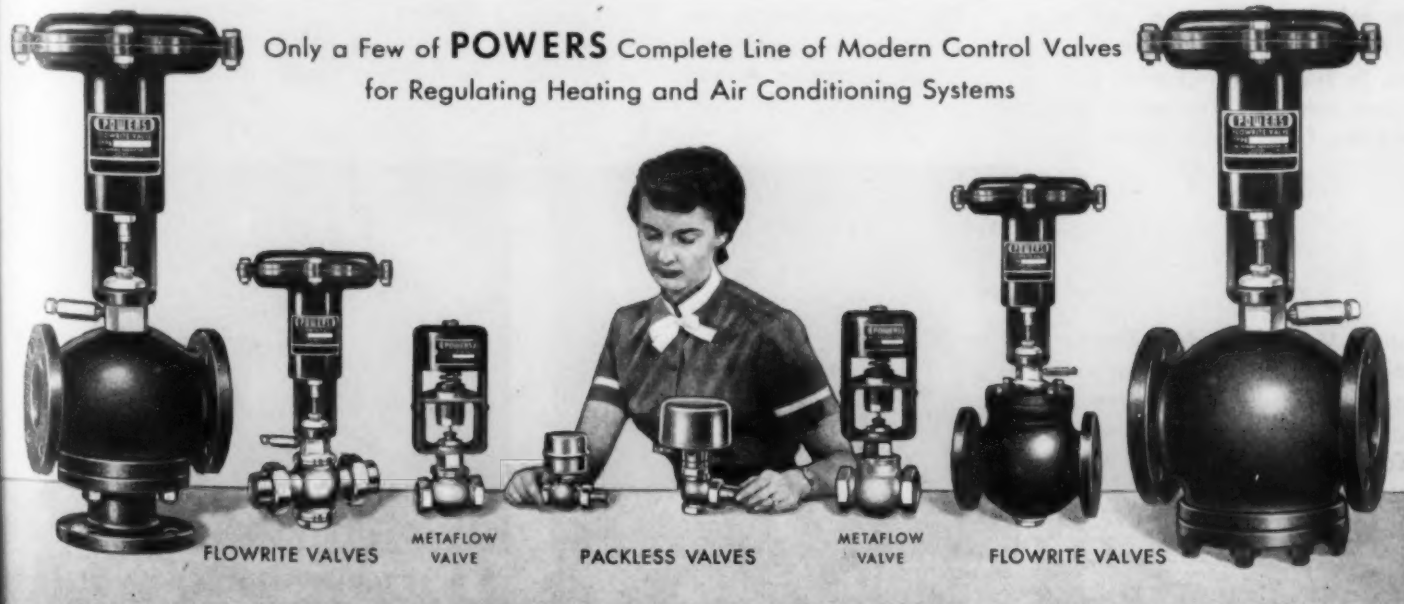

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NEWS FROM CANADA *by John Caulfield Smith*

R.A.I.C. 46TH ANNUAL ASSEMBLY HELD IN TORONTO

R. S. Morris, president of the R.A.I.C. addresses convention's annual dinner

THE 46TH ANNUAL ASSEMBLY of the Royal Architectural Institute of Canada, held in Toronto, April 23–25, concluded on a note of optimism and confidence in the construction outlook. The executive, headed by President R. S. Morris of Toronto, remains in office for another year.

In his annual report, President Morris reminded the convention that "there have been more architects doing more work and with a larger average income than ever before. Our membership has increased more than eight per cent in the past year." Graduates from five schools of architecture comprise the bulk of the new membership, and concerning these, Mr. Morris said, "I am one who believes that ability, mental capacity and the general attitude and character of the graduate are more important to the profession than what he knows, or what has been described as his 'muzzle velocity' on graduation."

Referring to standard professional documents and standardization of professional practice, Mr. Morris reported that the R.A.I.C. committee on legal documents "is doing splendid work in the revision of our owner-contractor cost-plus standard agreement."

Among features of this year's assembly was a seminar on new structural systems, conducted by C. D. Carruthers of the Toronto firm of Wallace, Car-

(*Continued on page 26*)

At the annual dinner: Above, left to right: Mr. and Mrs. A. S. Mathers, Toronto, Sir Hugh Casson, London, England, guest speaker at the convention, and Mr. and Mrs. Robert Pilot, Montreal

The Governor-General, the Rt. Hon. Vincent Massey, presents the Allied Arts Medal to sculptor Armand Filion

Edmund Purvis, executive director of the American Institute of Architects, chats with Mrs. H. Gordon Hughes

Near right: Mr. and Mrs. Peter Thornton of Vancouver, at left, discuss things with Mr. and Mrs. H. Ross Wiggs of Montreal. Far right: H. Gordon Hughes of Ottawa, Mrs. Edmund Purves, and John H. Wade of Victoria compare notes

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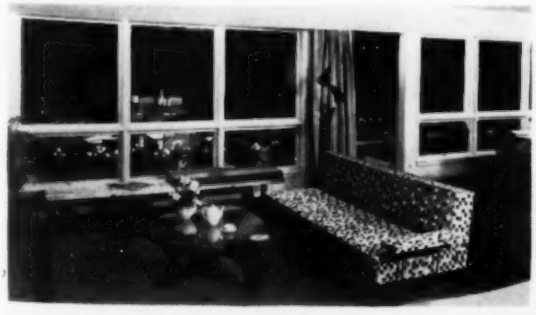

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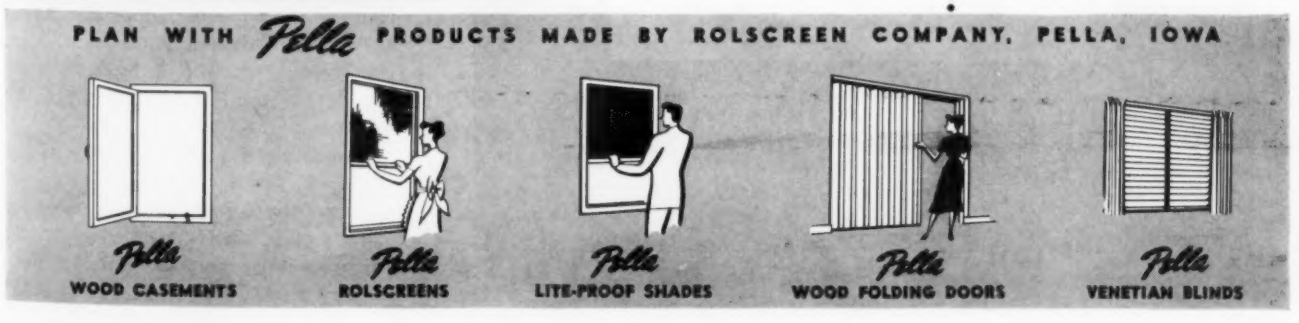
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CANADA

(*Continued from page 24*)

ruthers & Associates, consulting structural engineers. Another seminar, on air conditioning, was conducted by Charles S. Leopold, consulting engineer from Philadelphia.

At the annual dinner which climaxed the assembly, nearly 400 guests saw the

Directors of four of Canada's five schools of architecture meet at the opening session of the R.A.I.C.'s 46th annual assembly. Left to right: Pierre Morency, Ecole des Beaux Arts, Montreal, H. H. Madill, University of Toronto; John Bland, McGill University, Montreal; John A. Russell, University of Manitoba, Winnipeg

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Rt. Hon. Vincent Massey, Governor-General of Canada, accept an Address of Loyalty from Institute president Morris for transmission to Her Majesty the Queen, herself a Patron of the Institute. The Address was beautifully inscribed and illuminated by A. Scott Carter, Toronto architect and one of Canada's leading heraldic authorities.

The Governor-General presented the Allied Arts Medal to Armand Filion, Montreal sculptor, and the R.A.I.C. Scholarship Medal to his son, Hart Massey, Ottawa architect. He also presented College of Fellows certificates to the following new Fellows of the Institute: W. G. Blakey, Edmonton; F. Bruce Brown, Toronto; Frank G. Gardiner, Vancouver; H. Gordon Hughes, Ottawa; Lucien Mainguy, Sillery, Que.; Henri Mercier, Montreal; Robert E. Moore, Winnipeg; Hugh P. Sheppard, Windsor, and H. Ross Wiggs, Montreal.

Robert F. Legget, director of building research, National Research Council, Ottawa, was elected an Honorary Fellow in recognition of his work on the National Building Code.

President Morris was invested with a chain of office, presented by the Royal Institute of British Architects. John Roxborough Smith, immediate past president of the R.A.I.C., served as the investor.

Special guest at the dinner was Sir Hugh Casson, British architect in charge of the Coronation decorations for the city of London, who urged architects to use great occasions as a lever to effect

(*Continued on page 30*)

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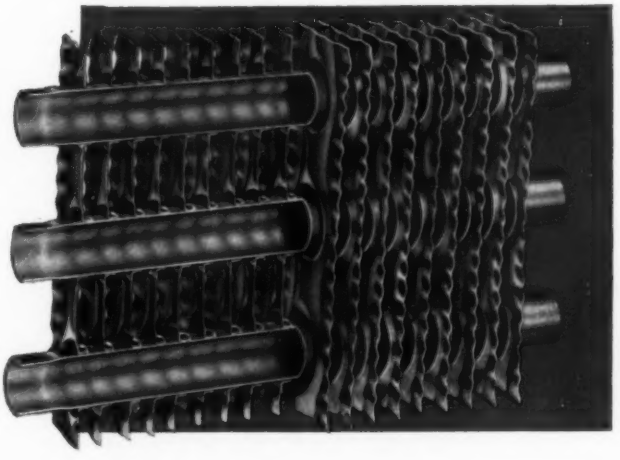

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HEATING
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CANADA

(*Continued from page 26*)

the brightening of their cities' appearance. He told his listeners that some sort of festivity was the "only thing that would restore civic consciousness." This was brought home to him in his role as designer of the Coronation route,

Group at exhibit of architectural competition sponsored by the Douglas Fir Plywood Association. Left to right: Professor Eric Arthur, University of Toronto; G. H. Tullidge, president of the Plywood Manufacturers Association; John Ma, second prize winner, Stan Barclay, first prize winner in eastern region, Professor John Russell, University of Manitoba

Board of Assessors for plywood competition look over the entries. Left to right: John A. Russell, University of Manitoba architecture director; Gordon S. Adamson, Toronto architect; Peter M. Thornton, professional advisor; John B. Armstrong, Manager, Plywood Manufacturer's Association; Pietro Belluschi, M.I.T. architecture dean

he said, when he found that people in London never noticed the lamp posts until he put things on them.

"As children, we notice everything," he said, "but as we grow older our eyes seem to gum up. By the time we become adults it's as though we had blinkers on. The artist is more alert visually than his fellows. He has a role to play in overcoming the boring, vulgar trivialities of our cities. The architect is the person best suited to get society and the artist back on speaking terms."

(*Continued on page 32*)

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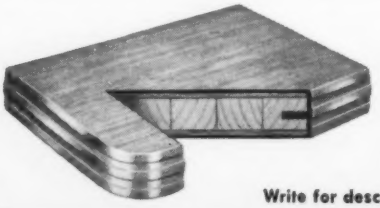

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For a copy of our latest Window Specifications Book and names of approved manufacturers, see Sweet's Architectural File (17a/ALU) or write to Dept. AR-6.

Pictured above: Shriners Hospital, Salt Lake City, Utah
Architects: Scott and Beecher *Contractor:* Olson Construction Company

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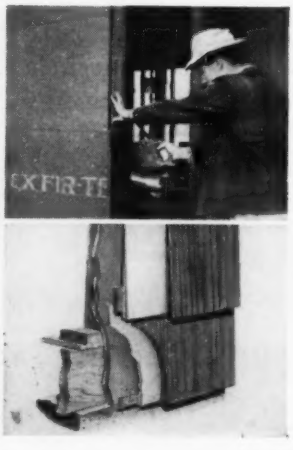

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THE RECORD REPORTS

CANADA

(*Continued from page 30*)

Central Mortgage Fellowships Offered to Students

Sixteen awards, totalling $20,800, are being offered to students of community planning, housing and urban development. The awards have been announced by D. B. Mansur, president of Central Mortgage & Housing Corporation. The funds are available under National Housing Act provisions.

The two major awards are senior fellowships worth $3000 each. These are for candidates with professional qualifications who have had administrative, teaching or research experience. Successful candidates in this class must undertake a year's work in research or study of housing or urban development.

Nine other fellowships of $1200 each are for community planning study at the Universities of Toronto, McGill, Manitoba or British Columbia. Graduates in social sciences, architecture or civil engineering are eligible for these. In addition, five bursaries worth $800 each are offered to students who wish to take special studies or research in the general field of housing and urban development.

Conference Cites Need for Integration in Building

An exploratory conference organized by the school of architecture of McGill University and held recently in Montreal, discussed integration of the various aspects of construction, including real estate, finance, research, manufacturing, design and erection.

John Bland, director of the school, told more than 200 delegates that it was necessary for everyone in the construction field — architects, engineers and contractors — to band together in a "wide fraternity" in the interests of producing cheaper home units. He said the conference had to face up to problems confronting it by studying methods of integration for the building industry. Pointing to the growth of shack settlements near Montreal, Edmonton and other cities, he said that until these were eradicated they would pose an architectural and moral problem.

Professor Bland cited organization of all phases of the construction trade as the greatest need today.

(*Continued on page 36*)

system . . . *in a package!*

For 10 to 50-room air conditioning jobs . . . a new "Packaged" water chiller . . . wired, piped and refrigerant-charged at the factory!

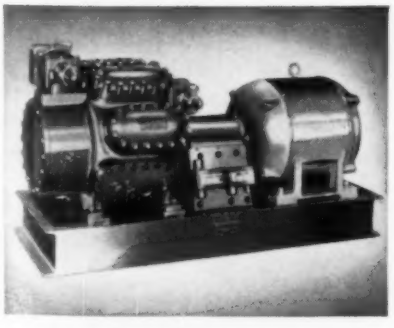
Now you can specify a packaged system to supply chilled water for air conditioning in hotels, office buildings, motels, theaters, stores . . . everywhere. And all without the necessity of matching separate components.

For here you have a complete refrigeration cycle . . . factory engineered, factory assembled, factory tested, factory guaranteed. The new TRANE Cold-Generator is *a single* unit, wired, piped and refrigerant-charged. Six sizes, from 10 tons up requiring only simple plumbing and electrical connections to put them in service.

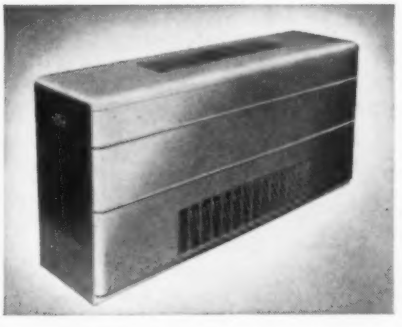
In this one compact unit, you get the reciprocating compressor, condenser, refrigerant piping, liquid cooler, control valves, motor and accessories. These field proven components are carefully engineered and exactly matched.

Get complete information at once on this new idea in packaged refrigeration. Learn how the new TRANE Cold-Generator frees you from details . . . makes air conditioning as easy to install as heating. Contact your nearest TRANE representative or write to TRANE, La Crosse, Wis.

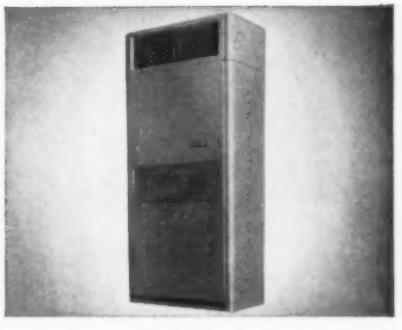
NO JOB TOO LARGE OR TOO SMALL FOR TRANE AIR CONDITIONING EQUIPMENT



For jobs from 3 to 50 tons, the TRANE Reciprocating Compressor packs maximum performance into minimum space. Factory assembled. Easy to install. Available with shell-and-tube condenser above compressor.



UniTrane unit gives tenant complete room-control of air conditioning. One standard piping circuit supplies unit with hot water in winter . . . chilled water in summer from TRANE Cold-Generator or larger CenTraVac.



In a package—TRANE Self-Contained Air Conditioners require only simple piping and electrical connections. Capacities from 3 to 20 tons. Optional water-saving evaporative condenser available in the 10, 15 and 20-ton models.

Generator *brings you comfort or process cooling . . . in a package!*

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CANADA

(*Continued from page 32*)

NEWS NOTES

• Ernest J. Smith has been elected president of the Manitoba Association of Architects. Other officers are: vice-president, Eric W. Thrift; executive secretary, Mrs. Douglas Chevrier; councillors, Dennis H. Carter, Philip M. Casey, John A. Chivers, A. James Donahue, Robert E. Moore, K. R. D. Pratt and Gilbert Parfitt. John A. Russell, past president, is an ex-officio member of the council.

• Newly elected president of the Province of Quebec Association of Architects is John Bland, director of McGill University's School of Architecture. Other officers include Lucien Mainguy, first vice-president; Edward J. Turcotte, second vice-president; André Mercier, treasurer; and Hugh Valentine, secretary. Eight councillors named are: R. C. Betts, R. E. Bolton, S. A. Cyr, G. Davarennes, F. J. Nobbs, P. Samson Levis, G. Venne and G. Leger.

Maurice Payette, retiring president, and Harold Lawson were presented with medals of merit for outstanding contributions to architecture in the province, and Mr. Payette also received a silver tray in token of many years' service to the organization. Both are fellows of the R.A.I.C.

Gordon W. Dick, Toronto plumbing apprentice (left), receives Ontario Association of Architects' annual craftsmanship award from E. C. S. Cox, chairman of O.A.A. public relations committee

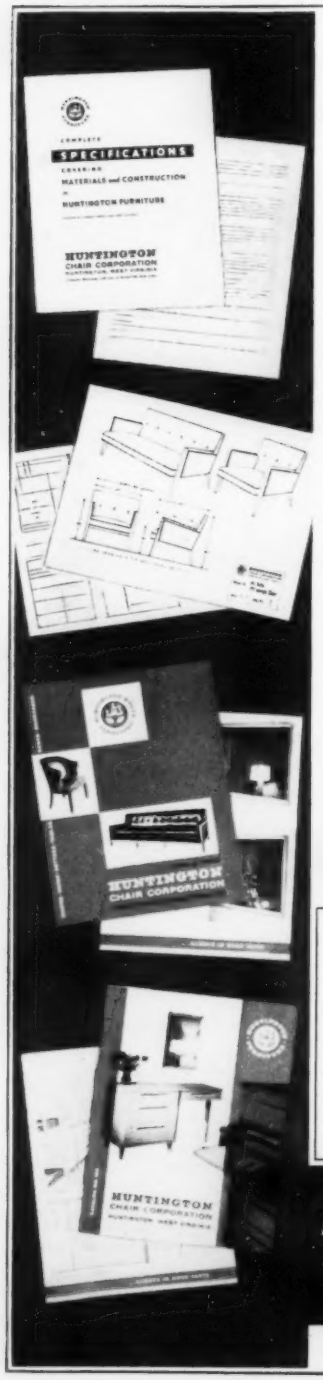
• Total value of construction contract awards for the first quarter of 1953 was $334,044,400. This was $28,325,500 below the figure for the same period in 1952. Totals for the first quarter of this year and for the month of March look like this on the chart:

Comparative Figures Compiled by MacLean Building Reports

($ Million)

	First Quarter		March	
	1953	Change from '52	1953	Change from '52
Residential	102.9	+34.9	46.2	+16.0
Business	138.1	+58.6	48.1	+13.2
Industrial	32.9	−41.6	18.7	− 7.8
Engineering	60.0	−80.3	35.8	+25.3
Total	334.0	−28.3	149.0	+46.7

• Gordon S. Shipp of Toronto has succeeded W. H. Grisenthwaite of Hamilton as president of the National House Builders Association. The organization held its 10th anniversary convention in Toronto recently and called for increased efforts from government and lending institutions to enable the housing industry to reach an annual production level of 125,000 dwelling units.



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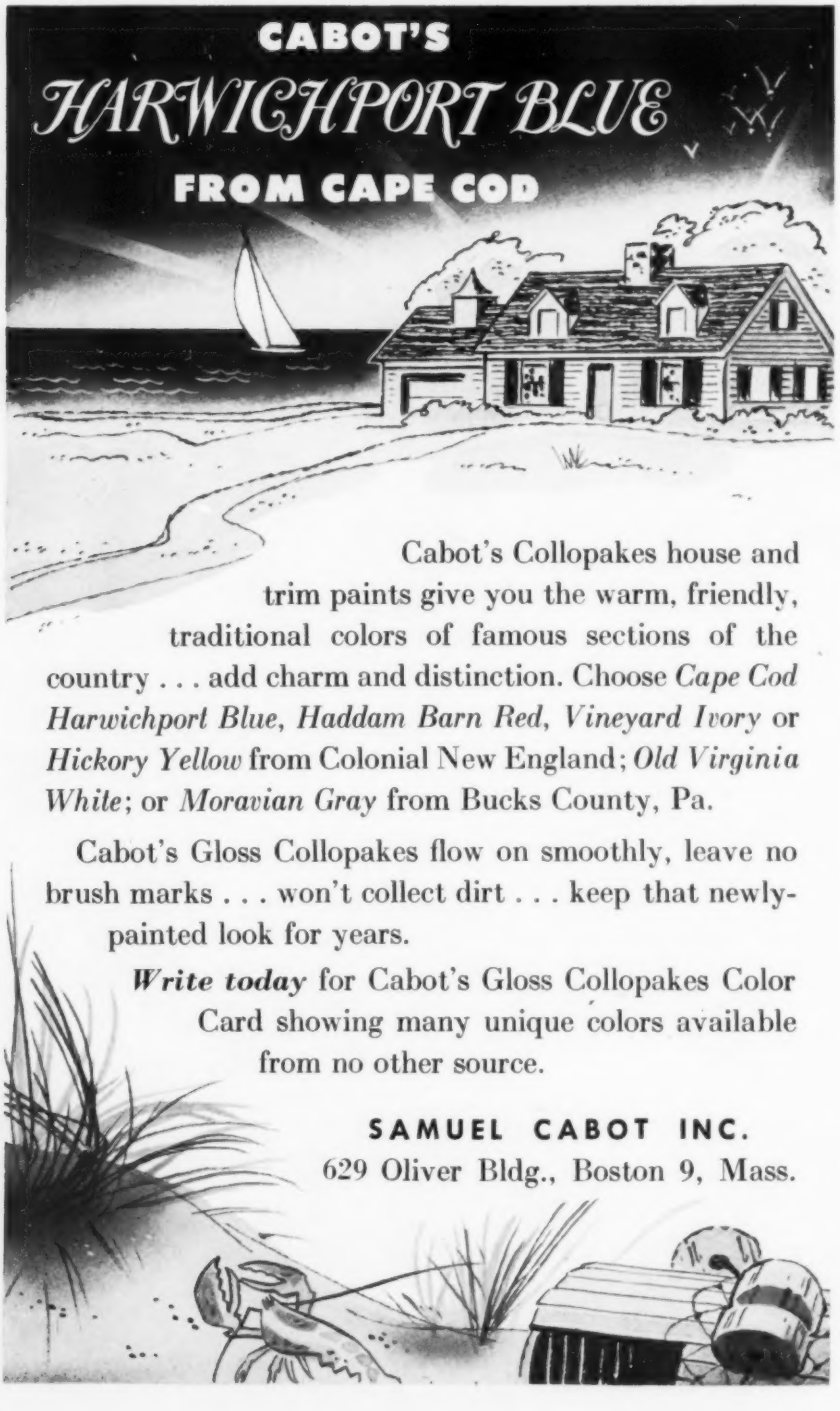
By Ernest Mickel

VA, FHA INTEREST RATES ON HOME LOANS GO UP

THE HOME BUILDING INDUSTRY finally won its long battle for a raise in VA and FHA loan interest rates. VA Administrator Gray capitulated early in May and the interest charges on VA-guaranteed housing loans (those mortgages made by private lenders) advanced from

(*Continued on page 286*)

Guy T. O. Hollyday, the new Commissioner of the Federal Housing Administration, with his predecessor, Walter L. Greene, now Assistant Commissioner, and Albert M. Cole, HHFA Administrator



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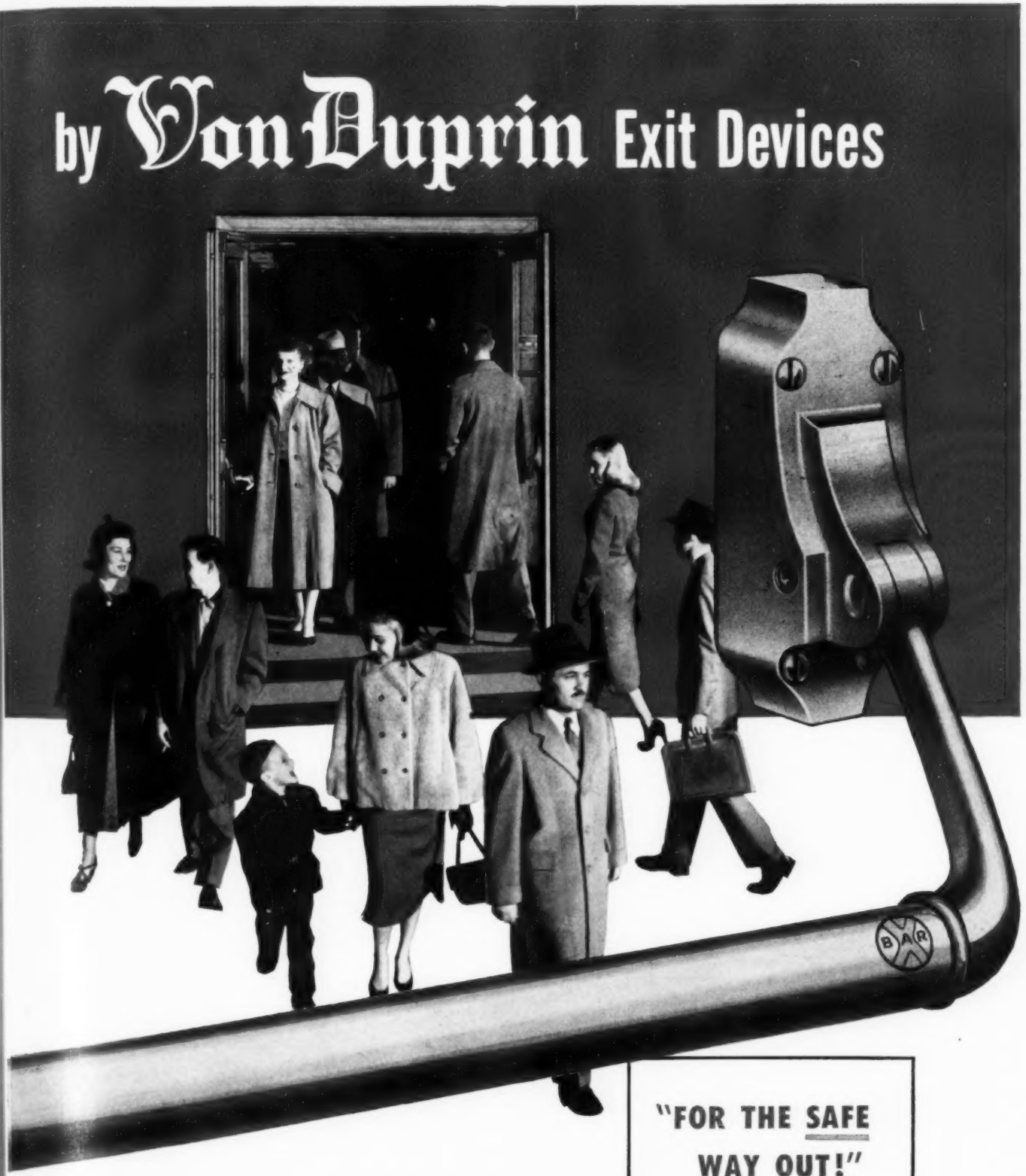
Trends in Brief

Credit gets more expensive. Commercial interest rates around the country were reported up generally from a quarter to a half per cent following the initial series of Government moves for tighter money. On April 13, in the Administration's first major financing operation, the Treasury launched a billion-dollar 30-year bond issue at 3¼ per cent, the highest yield offered by the Treasury in 20 years (2.95 had been tops). . . . On May 2, Federal Housing Administration loan rates were upped from 4¼ to 4½ per cent. . . . On May 5 VA-guaranteed home loan rates went up from 4 per cent to 4½ per cent.

Steel prices inch upward. Major steel companies led a parade of price boosts on steel items, mostly on "extras" — charges added to the base price to cover costs of such special processing as that for gage, size and metal composition. Increases in base prices were not expected before conclusion of steel wage talks; and on the theory that a wage raise of 10 cents an hour may be negotiated, a steel price increase of $4 a ton was thought likely in some quarters, with some items, including structurals, getting a bigger boost.

Economy, economy, economy. New construction programs were proving to be one of the easiest items to cut as the Administration continued its efforts to pare budget requests to a minimum — the Department of Commerce, for example, eliminated all funds for aid to new airport construction from its asking for the Civil Aeronautics Administration. An even more economy-minded Congress slashed away at appropriations requests. The first appropriations bill passed by the House at this session — the so-called Independent Offices Appropriations Bill — cut $721 million or 62 per cent from the Truman budget figure. It gave the Housing and Home Finance Agency $44.5 million less than the 1953 appropriation and allowed no funds at all for new public housing nor for housing research. The Senate, where Senator Taft was supporting the 35,000-unit level asked by the Administration, was expected to restore some funds for public housing — its usual role in the annual charette.

by Von Duprin Exit Devices



"FOR THE SAFE WAY OUT!"

Von Duprin

Fire and Panic Exit Devices

CONSTRUCTION COST INDEXES

Labor and Materials

United States average 1926–1929 = 100

Presented by Clyde Shute, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	127.0	126.7	124.1	128.0	123.6
1935	93.8	91.3	104.7	108.5	105.5
1939	123.5	122.4	130.7	133.4	130.1
1940	126.3	125.1	132.2	135.1	131.4
1946	181.8	182.4	177.2	179.0	174.8
1947	219.3	222.0	207.6	207.5	203.8
1948	250.1	251.6	239.4	242.2	235.6
1949	243.7	240.8	242.8	246.4	240.0
1950	256.2	254.5	249.5	251.5	248.0
1951	273.2	271.3	263.7	265.2	262.2
1952	278.2	274.8	271.9	274.9	271.8
Jan. 1953	278.4	275.0	274.0	277.6	273.8
Feb. 1953	278.2	274.8	273.7	277.4	273.6
Mar. 1953	278.9	275.4	274.9	279.0	274.2
	% increase over 1939				
Mar. 1953	125.8	125.0	110.3	109.1	110.8

ATLANTA

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	82.1	80.9	84.0	86.1	83.6
1935	72.3	67.9	95.1	87.1	85.1
1939	86.3	83.1	96.9	97.4	94.7
1940	91.0	89.0	136.8	98.5	97.5
1946	148.1	149.2	158.1	136.4	135.1
1947	180.4	184.0	178.8	157.1	158.0
1948	199.2	202.5	180.6	178.8	178.8
1949	189.3	189.9	185.4	180.8	177.5
1950	194.3	196.2	204.2	183.7	185.0
1951	212.8	214.6	88.6	202.8	205.0
1952	218.8	221.0	212.8	210.1	214.3
Jan. 1953	220.4	222.7	215.9	214.3	217.9
Feb. 1953	220.2	222.5	215.6	214.1	217.7
Mar. 1953	221.7	223.3	217.9	218.4	220.0
	% increase over 1939				
Mar. 1953	156.9	168.7	129.1	124.2	132.3

ST. LOUIS

1930	108.9	108.3	112.4	115.3	111.3
1935	95.1	90.1	104.1	108.3	105.4
1939	110.2	107.0	118.7	119.8	119.0
1940	112.6	110.1	119.3	120.3	119.4
1946	167.1	167.4	159.1	161.1	158.1
1947	202.4	203.8	183.9	184.2	184.0
1948	227.9	231.2	207.7	210.0	208.1
1949	221.4	220.7	212.8	215.7	213.6
1950	232.8	230.7	221.9	225.3	222.8
1951	252.0	248.3	238.5	240.9	239.0
1952	259.1	253.2	249.7	255.0	249.6
Jan. 1953	260.2	253.2	253.4	260.7	253.8
Feb. 1953	260.3	253.3	253.7	261.4	253.9
Mar. 1953	261.1	254.0	255.2	263.5	254.6
	% increase over 1939				
Mar. 1953	136.9	137.4	116.3	119.9	113.9

SAN FRANCISCO

1930	90.8	86.8	100.4	104.9	100.4
1935	89.5	84.5	96.4	103.7	99.7
1939	105.6	99.3	117.4	121.9	116.5
1940	106.4	101.2	116.3	120.1	115.5
1946	159.7	157.5	157.9	159.3	160.0
1947	193.1	191.6	183.7	186.8	186.9
1948	218.9	216.6	208.3	214.7	211.1
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
1952	250.2	245.0	245.6	248.7	249.6
Jan. 1953	252.1	246.5	250.1	254.1	254.6
Feb. 1953	251.9	246.3	249.8	253.9	254.4
Mar. 1953	252.3	246.7	250.4	253.9	254.4
	% increase over 1939				
Mar. 1953	138.9	148.4	113.3	108.3	118.4

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926–29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

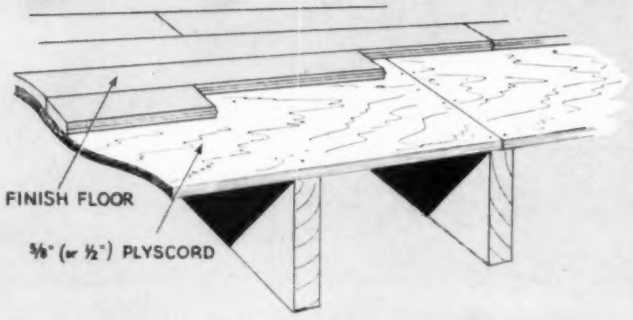
$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926–29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.

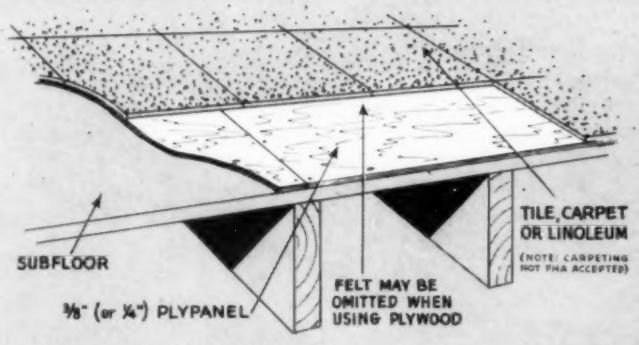
go down fast, cut labor costs in half



APPLICATION: Apply with face grain across joists. Usual installation is over joists 16" o.c., but spacing up to 24" o.c. satisfactory with 25/32" strip flooring. Use 8d com. nails for 5/8" plywood, 6d for 1/2"; nail 6" o.c. at panel edges, 10" o.c. on other bearings.

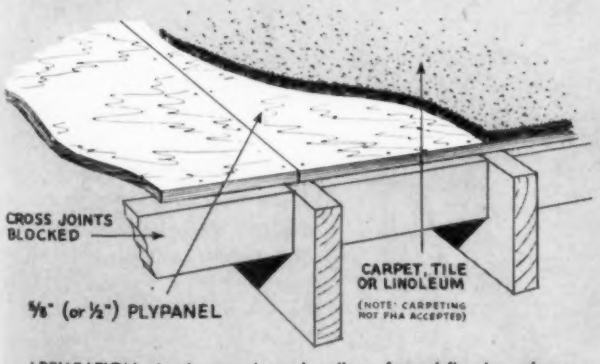
faster floor construction

makes floor coverings look better, last longer



APPLICATION: Preferable to place panels with face grain running across joists, breaking joints over joists. Nail approximately 6" o.c. on panel edges, 8-10" o.c. elsewhere. Ringed nails hold better.

subfloor-underlay gives really big savings



APPLICATION: Apply panels and nail as for subflooring above. Note blocking along panel edges at right angles to joists.

REQUIRED READING

PRACTICAL HOUSES FOR CONTEMPORARY LIVING

Practical Houses for Contemporary Living. By Jean and Don Graf. F. W. Dodge Corporation. (119 West 40th St., New York, N. Y.) 1953. 8¾ by 11¼ in. 192 pp., illus. $6.95.

REVIEWED BY

HENRY OTIS CHAPMAN, A.I.A.

Mike Pearlman

Residence of Dr. and Mrs. I. S. Ravdin, Bucks County, Pa. George Daub, A.I.A., architect. From "Practical Houses for Contemporary Living"

THIS unusual book, dealing with one of the most interesting phases of architecture, handles the problems of contemporary living in a broad, unprejudiced manner. The unquestioned ability of the authors, and their unique position in the architectural profession in which each is well qualified through his or her own experience, affords them background and authority essential to such a book.

Don, a member of the American Institute of Architects, who has practiced in North, South, and West, and has created Don Graf's Data Sheets which are used as standards in so many architectural offices, with his wife, Jean, student, writer and critic, make up the team of Graf and Graf.

They traveled more than 12,000 miles while studying the subject of this effort, visited hundreds of houses, met the owners and the architects, and without taint of prejudice recorded in workable manner the material thus procured.

They are not designers, nor do they compete with the architects whose designs they have selected. Some real purpose motivated the selection of each house without regard for the designer. Prominent names are mingled with the lesser known, but each in his own right has solved an interesting problem. The authors, with real authority, submit their message to the public with humor and good judgment.

This is a working book worthy of study. There is splendid balance of geographical location, economic range, and personal tastes and desires. The simplicity of the format, with story geared to the consumer yet completely architectural in background and material, makes for interesting and pleasurable reading. The photographs are by better than average photographers, while the plans, consistent and simply rendered, drawn to one scale for easy comparison, are neatly keyed to the supporting photographs.

The authors reveal a democratic approach to taste. They impose no dictates except of site, budget and locale. They realize and emphasize that the fundamental problems and influences of family life must guide the architect, and that the practical houses for contemporary living are those designed to satisfy the personal demands of the owner adapted to site and regional climatic conditions.

To be truly workable, the authors have selected practical details and listed them under appropriate subject headings so that those seeking some special feature may find it readily available. This is more than a reporting book. It analyzes, weighs and reveals how personality is required to produce a home — not a house.

Through careful consideration and judgment, the authors have presented an unusual group of houses from every part of the country, examples representative of the region well adapted to site conditions and designed for diversified family circumstances. It is well to point out that climate is important and stressed as a guiding influence in many designs.

The authors seem to realize and prove that a successful structure is the result of a wise compromise and a happy balance of plan. They have treated their subject well and have produced a book worthy of their name.

Façade, Old Capitol, Frankfort, Ky. From "Architecture In Old Kentucky"

ARCHITECTURE IN OLD KENTUCKY

Architecture in Old Kentucky. By Rexford Newcomb. University of Illinois Press (Urbana, Ill.). 1953. 8½ by 11 in. 185 pp., 70 plates.

REVIEWED BY CARL SCLARENCO

FOR a long time this reviewer (who happens to hail from Kentucky) has been hoping for the kind of book on the state's architecture which has now been made available with Professor Newcomb's comprehensive general study. Generously illustrated and written with care and sympathy, this is a volume which should be welcome to everyone who enjoys reading about or looking at the graceful and vigorous buildings of America's past, in this case those of a region rich in tasteful and craftsmanlike structures. However, aside from the author's own and more specialized earlier book of photographs and measured drawings ("Old Kentucky Architecture," William Helburn, Inc., New York, 1940)

(Continued on page 48)

INSULATED METAL WALLS

for INDUSTRIAL and COMMERCIAL BUILDINGS

ALUMINUM, STAINLESS or GALVANIZED STEEL

More and more architects are turning to insulated metal walls for industrial plants, powerhouses and other types of industrial and commercial buildings where this modern wall construction offers certain definite advantages. These advantages include: Lower cost in both material and labor, reduction in construction time—plus the fact that insulated metal walls can be erected under weather conditions which preclude masonry construction. Insulated Metal Walls also lend themselves to individual architectural expressions in design—the powerhouse illustrated here is a good example. In this building, vertical panels of continuous sash in combination with a Mahon Fluted Metal Wall produces a striking appearance. Mahon Insulated Metal Walls are available in the three patterns shown below. The Mahon "Field Constructed" Fluted or Ribbed wall can be erected up to sixty feet in height without horizontal joints—a feature which is particularly desirable in powerhouses or other buildings where high expanses of unbroken wall surface are common. See Sweet's Files for complete information and Specifications, or write for Catalog No. B-53-B.

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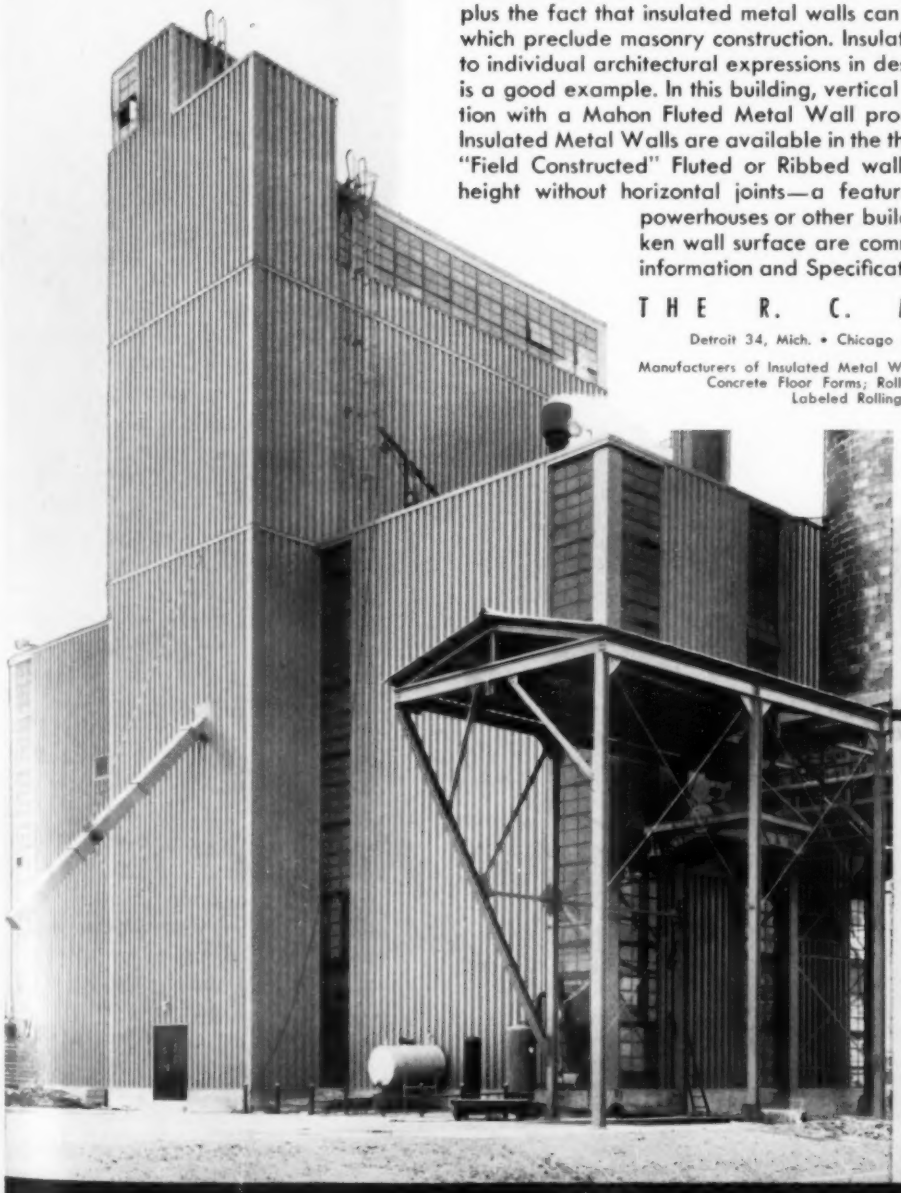
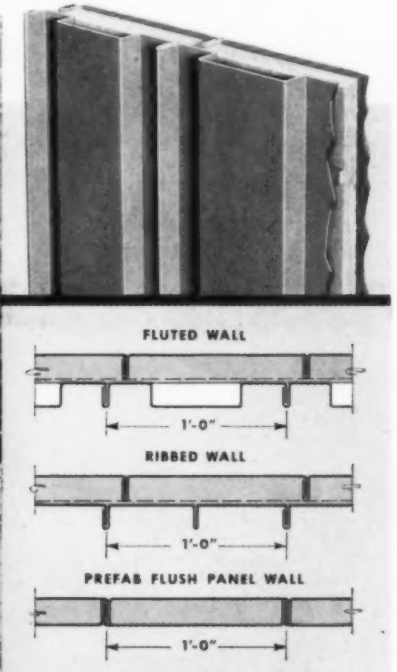
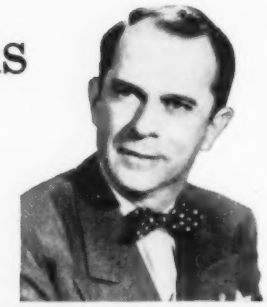




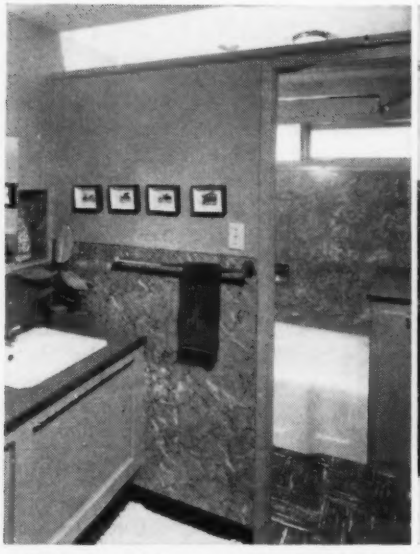
The Over-all "U" Factor of the various Types of Mahon Insulated Metal Walls is Equivalent to or Better than a Conventional sixteen inch Masonry Wall.

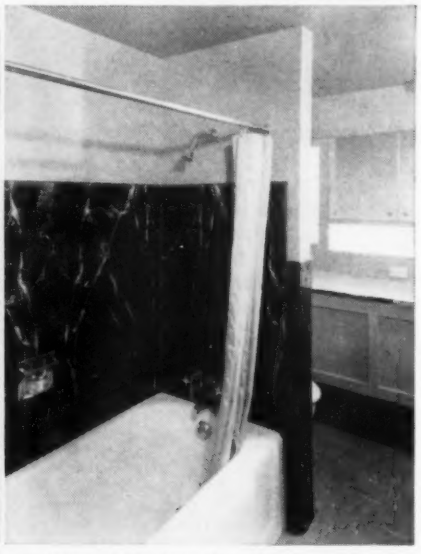
MAHON

"...Marlite bathrooms are the talk of the town"



W. P. "Bill" ATKINSON
Past President of NAHB

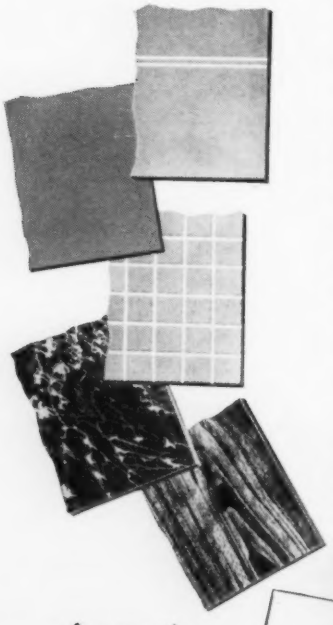




Wainscot and tub area are Rose De Brignoles Marble Panel. Wall at right (not shown) is Natural Walnut Marlite Woodpanel.

This beautiful bathroom has a four foot wainscot of Verdi Antique Marlite Marble Panel for permanence and easy cleanability.

Beautiful Country Estate Homes in Midwest City, Oklahoma, sell faster with modern divided bathrooms of Marlite prefinished wallpanels. W. P. Atkinson, builder of these popular homes, is one of the originators of the famous "trades secrets" house. He states:



"We have chosen Marlite for our smartly designed homes because of its beauty, economy, and easy-to-clean qualities.

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REQUIRED READING

(Continued from page 46)

plus a great many individual articles by various hands which have appeared in more-or-less-scholarly periodicals, the historic architecture of the state has received less than its fair share of attention outside its own borders. This is pointed up by the fact that the present volume is really the first general account of the development of Kentucky architecture which has been published.

The book which Professor Newcomb has now given us, however, goes a long way toward making up for neglects of the past. His interest in the state and its buildings has been a long and sustained one, and his book is the product of more than 30 years of study and research. Beginning with the earliest origins, the log cabins, forts and settlements of Kentucky's founding, he traces the development of its buildings, through Georgian, Federal, Greek Revival and the other 19th century revivalist movements, up to the present day. Special chapters are devoted to the handsome structures built at Pleasant Hill by those strange people, the Shakers, and to the works of Gideon Shryock, whose preeminence among Kentucky architects few will dispute. Other chapters are devoted to brief accounts of the state's artists and craftsmen.

Throughout the book, Professor Newcomb's account is lucid and sustained. The only objection to it, in fact, that this reviewer (perhaps unwarrantedly) feels any compulsion to register is one which might be advanced against most books of this kind. In such histories the individual trees sometimes seem to blot out the forest, and the continuity of the work is interrupted by numerous detailed architectural descriptions of buildings which are pictorially represented by only one or two views and perhaps a plan, or, as sometimes, not at all. To some, this may not be a source of annoyance, but to others — this reviewer included — it is. And from the latter point of view, perhaps it would be as well if writers of such books as this could place the more detailed information about individual buildings in separate sections, maybe near the plates, accessible to all who want it, but not distracting to those whose inability to sustain interest, faulty powers of visualizing, lack of awareness or whatever prevent them from enjoying such detailed de-

(Continued on page 336)

SILVER
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Food Service Equipment Makers Get National Sanitation Code Of Standards to Guide Them
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AWARDS	'53	'52	'51	'50	'49	'48	'47
FIRST	1		1		2		
MERIT	8	2	2	3	2	2	2
HONOR	1	3	4	3	3	1	1
TOTAL	10	5	7	6	7	3	3

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FAMOUS-BARR Clayton, Missouri	First 1949	EDDY'S RESTAURANT Kansas City, Missouri	Merit 1950	BLISS HOTEL COFFEE SHOP Tulsa, Oklahoma	Honor 1951
HERMANN HOSPITAL Houston, Texas	First 1949	INDIANA UNIVERSITY Men's Residence Halls Bloomington, Indiana	Merit 1950	MIAMI BUFFET Atlanta, Georgia	Honor 1951
KEN EDDY'S DRIVE-IN Lincoln, Nebraska	Merit 1953	MACY'S GARDEN TEA ROOM Kansas City, Missouri	Merit 1950	MINNEAPOLIS HONEYWELL REGULATOR CO. Minneapolis, Minnesota	Honor 1951
HOTEL MUEHLEBACH Kansas City, Missouri	Merit 1953	LA SALLE HOTEL South Bend, Indiana	Merit 1949	HOTEL WEBSTER HALL Pittsburgh, Pennsylvania	Honor 1951
PRUDENTIAL LIFE INSURANCE CO. Houston, Texas	Merit 1953	NORTH AMERICAN LIFE & CASUALTY CO. Minneapolis, Minnesota	Merit 1949	LOGAN BASIC COLLEGE St. Louis, Missouri	Honor 1950
PURDUE UNIVERSITY Residence Hall "X"—Lafayette, Indiana	Merit 1953	UNIVERSITY OF NEBRASKA Lincoln, Nebraska	Merit 1948	MERCY HOSPITAL Springfield, Ohio	Honor 1950
ST. JOHN'S ORPHANAGE Belleville, Illinois	Merit 1953	ST. JOHN'S HOSPITAL St. Louis, Missouri	Merit 1948	MONSANTO CHEMICAL CO. St. Louis, Missouri	Honor 1950
SWEDISH-AMERICAN HOSPITAL Rockford, Illinois	Merit 1953	MILLEMAN & GILBERT AIRPORT RESTAURANT Kansas City, Missouri	Merit 1947	DETROIT ATHLETIC CLUB Detroit, Michigan	Honor 1949
THOMPSON PRODUCTS, INC. Euclid, Ohio	Merit 1953	MENGER HOTEL San Antonio, Texas	Merit 1947	NATIONAL TODDLE HOUSE CORP. Memphis, Tennessee	Honor 1949
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fountain luncheonettes to hospital diet kitchens and factory cafeterias. They have been doing an annual gross business of 13 billions of dollars in recent years, making them the fourth largest retail operation in the nation and taking 25 cents of every dollar spent outside the home. Standards of sanitation in these places vary from excellent to very very bad . . . . **Free Reprints of this complete Newspaper Article available to those interested in "up-grading" the industry — with permission granted for reprinting. Write Dept. C. C. T. Southern Equipment Co.**

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COLLEGE BUILDINGS

ARCHITECTURAL RECORD
BUILDING TYPES
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STUDY NUMBER 199

When Architectural Record published a study of college building design in June, 1950, we thought our colleges faced an acute problem. All the figures and opinions indicated the need was pressing. The intervening years have hardly improved the situation.

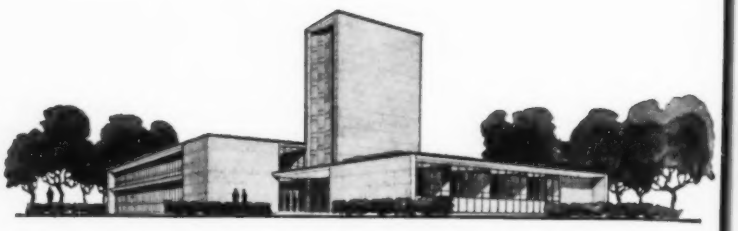
Why? For one thing, the amount of building and rebuilding undertaken recently has been enough only to offset the worst cases of overcrowding and obsolescence; and it has often had the effect of intensifying dissatisfaction with other structures or expedients, those we once thought might be put up with a while longer. Now, compared with new buildings which even seem to anticipate demands, the restrictions imposed by unsuitable architectural antiques — few of them "genuine" antiquities! — tend to become unbearable.

For another, college enrollments continue to jump. Prof. R. Clyde White, director of institutional research at Western Reserve University, writing in the January 1953 issue of the journal of the American Council on Education, expects enrollments to double by 1965 and continue high until 1970. Using 1950 as a base, he predicts increases of 12 per cent by 1955, 49 per cent by 1959, 87 per cent by 1961, 137 per cent by 1964. He cites a definable trend toward increased college entrance among secondary school graduates, greater proportions of women students and students from low-income families, and greater pressure from employers for college-graduate employees. "We have about eight years," he concludes, "in which to plan to determine admission requirements and to supply faculty, buildings and equipment for the roaring 60's."

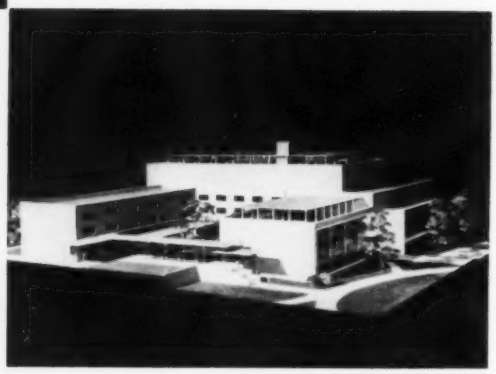
Where is the money coming from? On March 5 Dean Rusk, president of the Rockefeller Foundation, told the National Conference on Higher Education meeting in Chicago that higher education could use $300,000,000 to $400,000,000 more annually than it now receives — not all of it for building construction, of course; and that private endowments or foundations cannot meet this additional need; that it is three times their combined income. In the past some Federal funds have been available under the Housing Act of 1950. In one month, September 1952, for instance,

COLLEGE BUILDINGS

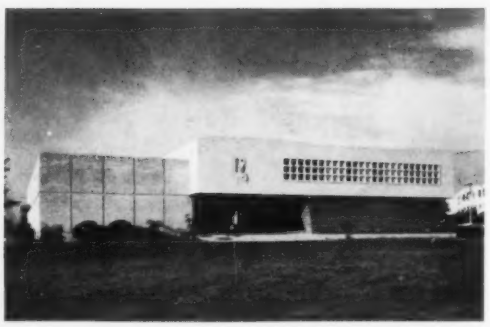
Proposed campus development and . . .



High voltage lab, Rice Institute; Pierce & Pierce, Archts.



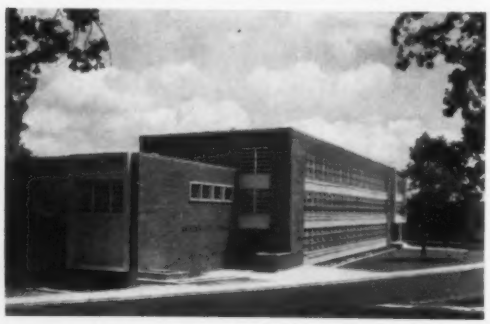
. . . design for new library, University of Pennsylvania; Harbeson, Hough, Livingston & Larson, Archts.



Molitor

Museum, Bob Jones University, South Carolina; W. E. Freeman Assoc., Archts.

Baptist Student Center, West Texas State; Norton & Mayfield, Archts.



Molitor

Chemistry Building, Clemson; Hopkins, Baker & Gill, Archts.

approved applications under the Act's Title IV totalled $32,675,000, all for college building construction. But changes in housing policy are under way; what is happening to the small revolving fund set up by the 1950 act? Can government money continue available without strings attached?

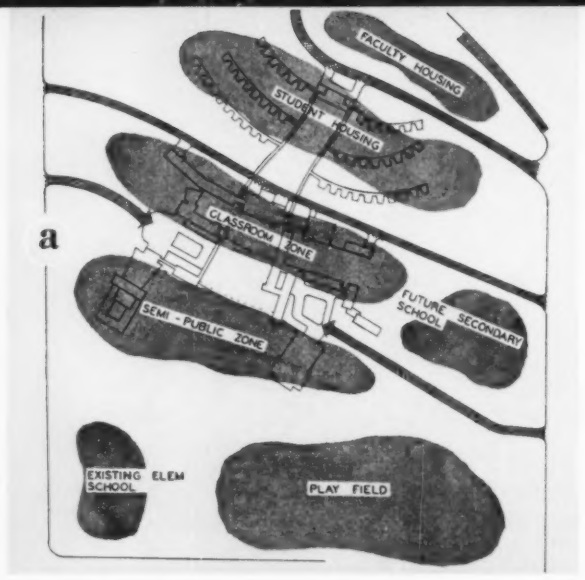
It behooves us, then, to be doubly sure to design the needed buildings with true economy, regarding not only initial construction expense but also the long-term economies of maintenance, replacement and obsolescence, and above all with their avowed purpose, education, firmly in mind. Under such criteria the contemporary architect performs best. The situation is made to order for him. One large university, which had always built in the Georgian style despite continual pressure from its architects, has just commissioned a "modern" library. Another's conservative planning committee condemns "the sacrifice of plan for elevation" extant on its own campus, recommending "contemporary" design. Not only are students demanding buildings in tune with our times, as we intimated in June 1950; scarce dollars and huge enrollments force us in that direction.

NEW UNIVERSITY OF MINNESOTA CAMPUS AT DULUTH

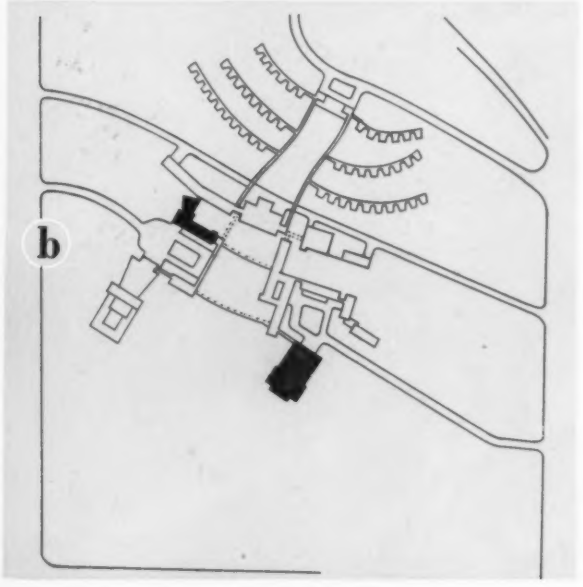
Winston A. Close, Advisory Architect,

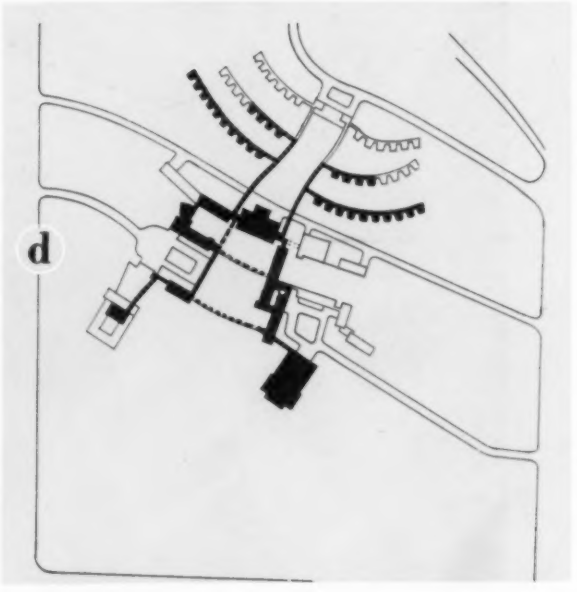
U. of M. Chairman, Campus Plan Committee

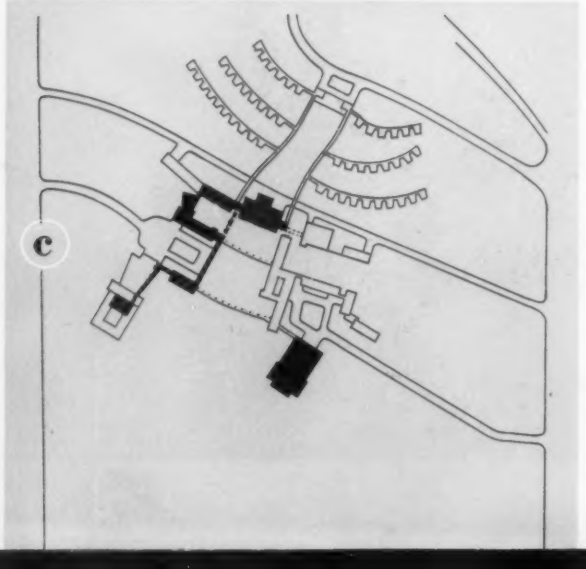
THE UNIVERSITY of Minnesota is currently developing a new campus for a branch of the University in Duluth. The branch is a co-ordinate college of the University, with a present enrollment of 1200 students and an anticipated peak enrollment of 3500 in 1970, drawn chiefly from Duluth, surrounding communities and



a, ***general allocation of space; building zones parallel contours for ease of cross-campus circulation; no roads except service drive which underpasses enclosed corridors.*** **b,** ***condition in 1952; Science and Math building in use, Physical Education building under construction.*** **c,** ***first phase of development; Boiler Plant containing maintenance shops, Classroom Building (eventually to become Administration) and Library (to become classrooms).*** **d,** ***second phase; some student housing, general purpose classrooms and studio space added; entire group interconnected***





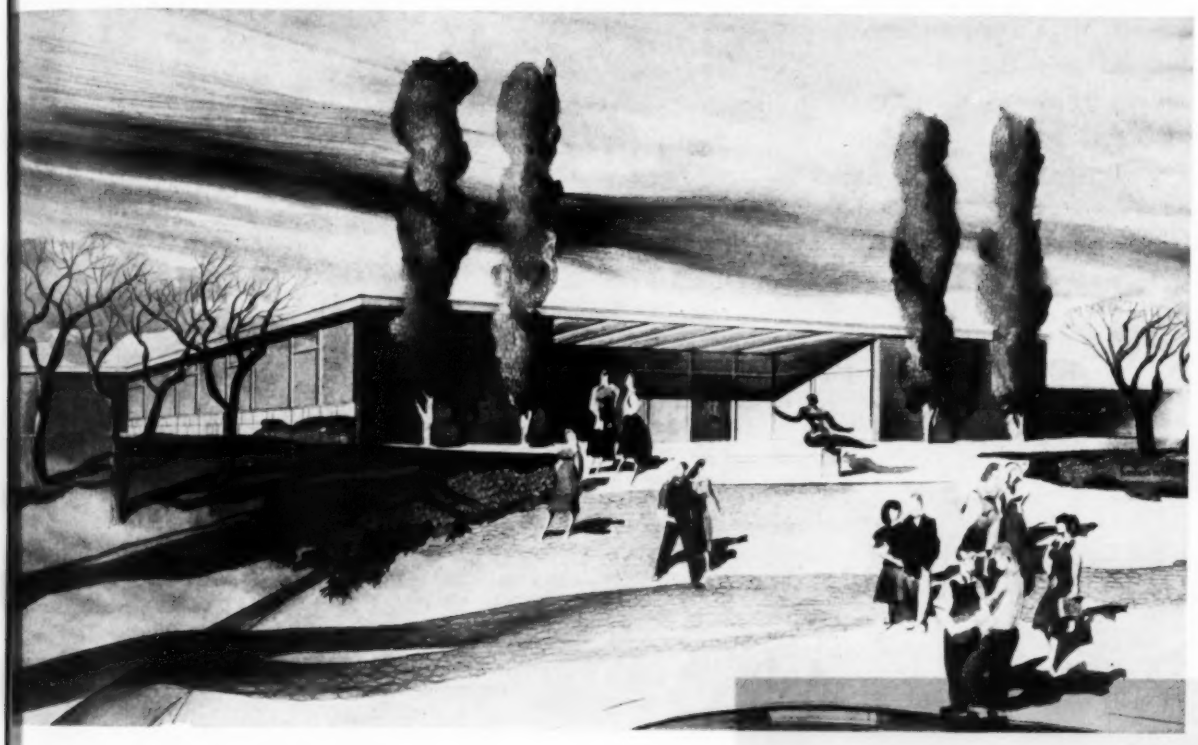


some more distant points. The 160-acre site, in a fine residential area of the city, overlooks Lake Superior. The natural approach is from the lower side of the sloping campus. After several studies, a free yet compact plan closely related to the topography, and with buildings interconnected to offset the severe winter climate, was determined upon.

Semi-public buildings are on the approach side, the lowest range of buildings accessible to streets and parking spaces. Next above are the main instructional buildings, served by the only vehicular road on the campus, a service drive which underpasses corridors leading downhill from the students' quarters. Farther up the hillside are the ranges of single-story student housing units which look out to the lake over all the buildings below. These cottages, each accommodating eight students, are connected by corridors to each other, to the reception lounge on their uphill side, and to the student center in the instructional zone. Circulation between buildings across the slope is accomplished by enlarging the utilities tunnels, which would be required in any event, to become passageways. Due to the slope these tunnels will have natural light through one exposed wall.

The Department of Admissions and Records at the Minneapolis Campus contributed in an important way to the program formulation by careful study of probable enrollments and inter-

MINNESOTA—DULUTH CAMPUS



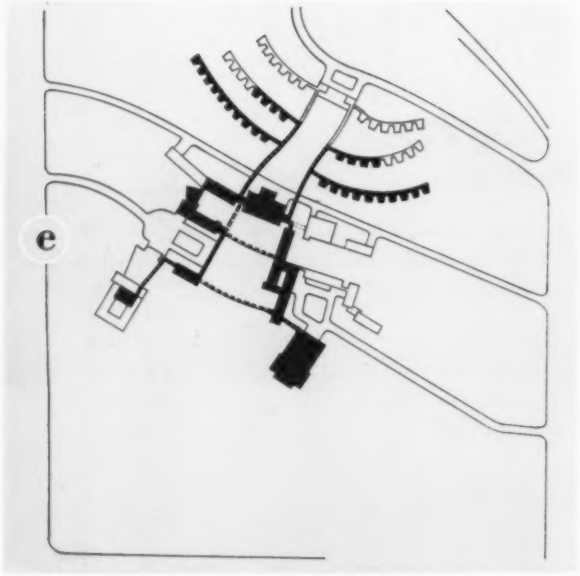
Students are to be housed eight to a cottage (below) with connecting ramped, enclosed corridors leading to academic buildings. Above: reception lounge in cottage group

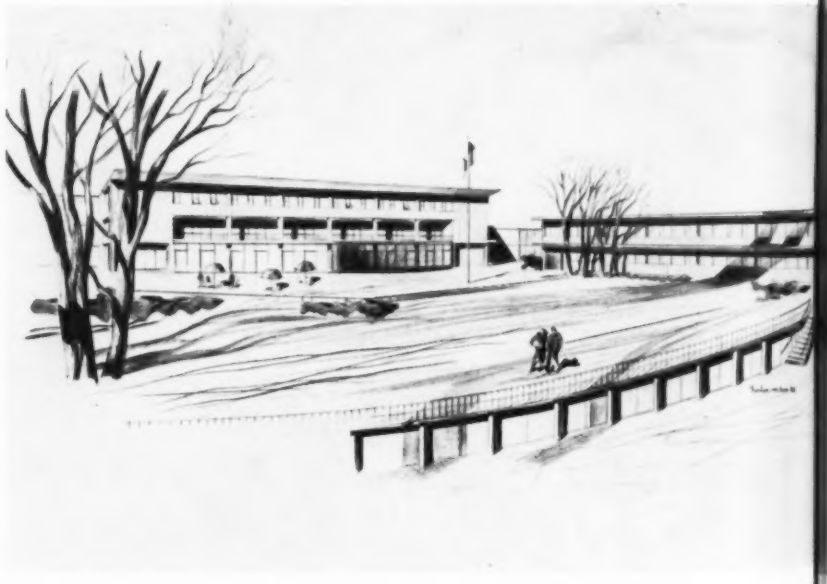
Sketches by Harlan McClure

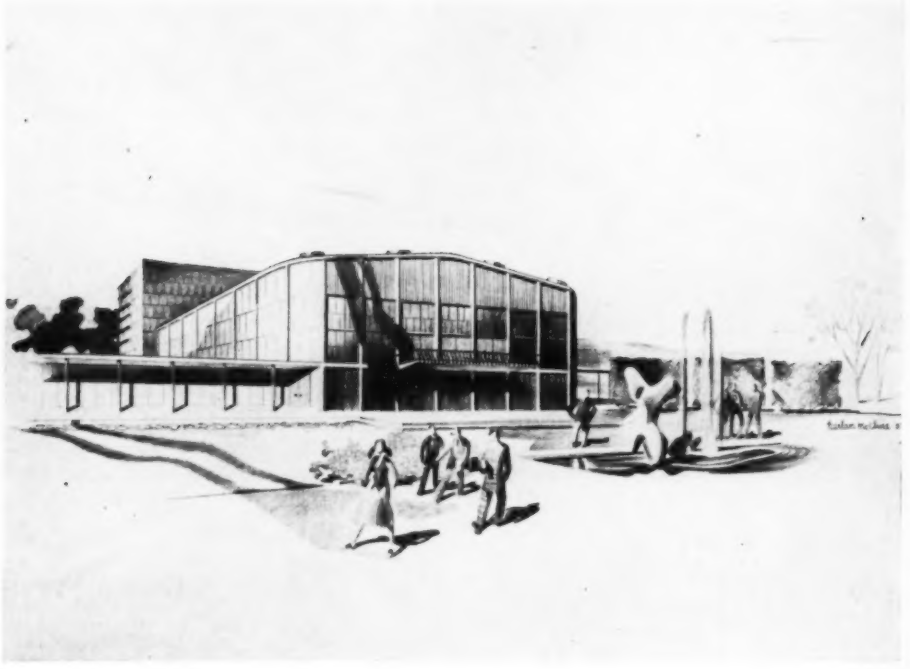
departmental student contacts for various phases of the plan development. Since a competent, experienced faculty is in being at Duluth, and since the courses of study are clearly prescribed, a rare opportunity existed to establish with reasonable certainty the requirements twenty years hence.

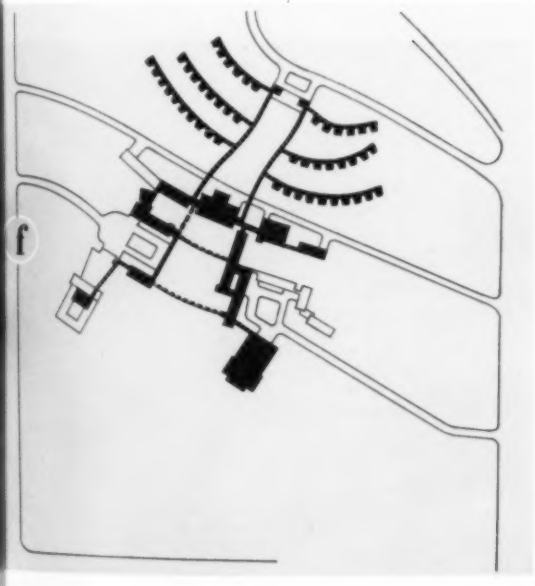
Preliminary schematic studies have been made for most of the buildings. These studies are continuing to a stage of fairly complete preliminary plans which can be reviewed and developed quickly as funds become available for construction of the various units.

e



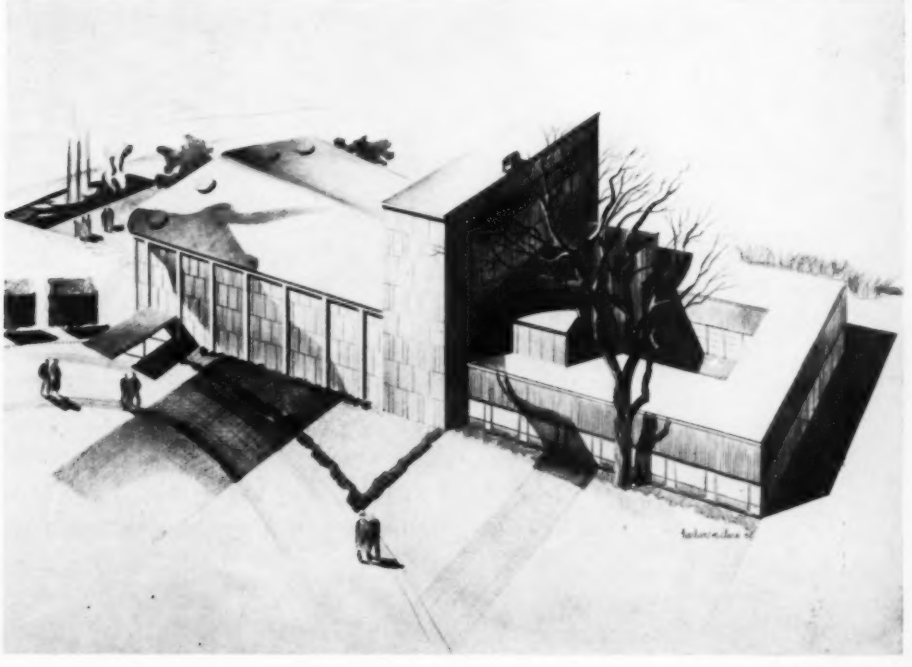






e, *third phase of development: as enrollment expands more student housing is needed. Additional classroom requirements necessitate removal of library and health service from areas used as classrooms; by now, space needs for these functions can be accurately determined and suitable buildings provided.* f, *final stages, about 1970; several special buildings, including Science Laboratory, another classroom building, Home Economics Building, Military Science Building, Auditorium for predicted peak enrollment of 3500, expanded heating, physical plant shops and storage facilities. Further expansion by developing more quadrangles can be easily accomplished. Sketches on facing page: Student Center, Museum gallery and sculpture court. Above and below: Auditorium*

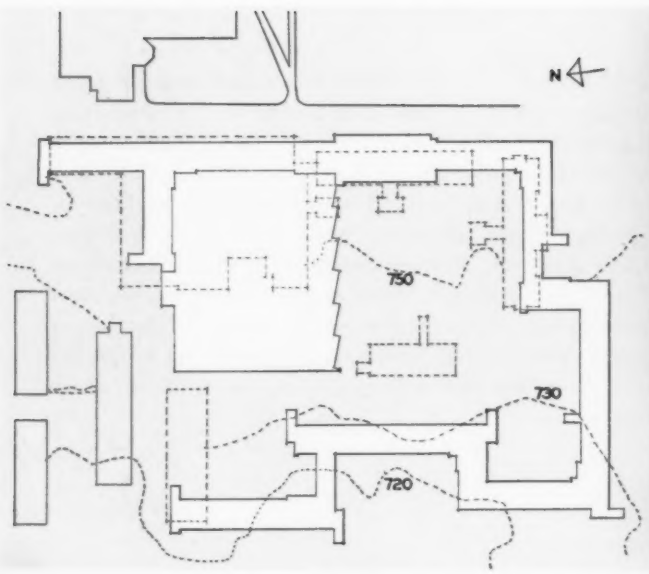
Sketches by Harlan McClure

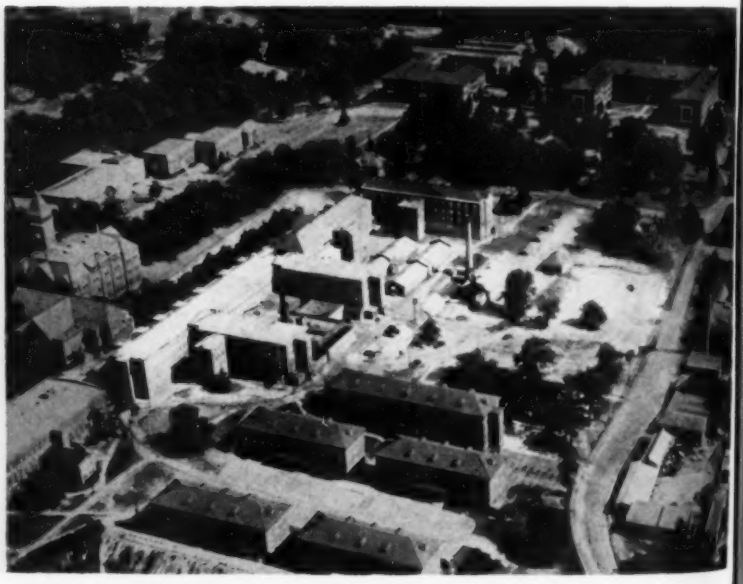


CLEMSON A. & M. COLLEGE, at Clemson, South Carolina, has for years been struggling with outmoded dormitory buildings, an inadequate mess hall and a rash of more or less unpremeditated structures, some of them supposedly "temporary." This is no problem peculiar to Clemson; other colleges, north and south, have been grappling with it too. Piece by piece, Clemson is providing new facilities on its rolling, wooded campus. A few years ago (see ARCHITECTURAL RECORD, August, 1951) Clemson House, a combination hotel-apartment house, and Clemson Homes, faculty housing, were built. They were designed by the architects now commissioned to develop a dormitory "barracks" quadrangle for students. A new mess hall, shown in white at the left of the site plan, is to be included.

COLLEGE BUILDINGS

NEW DORMITORY "BARRACKS" G

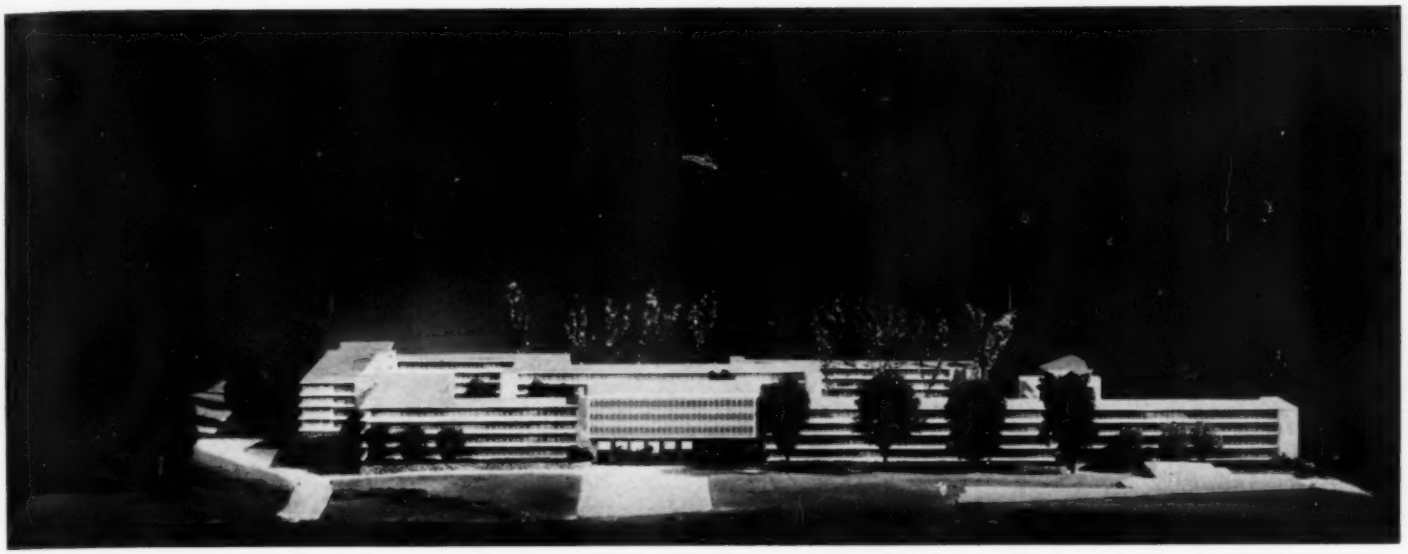




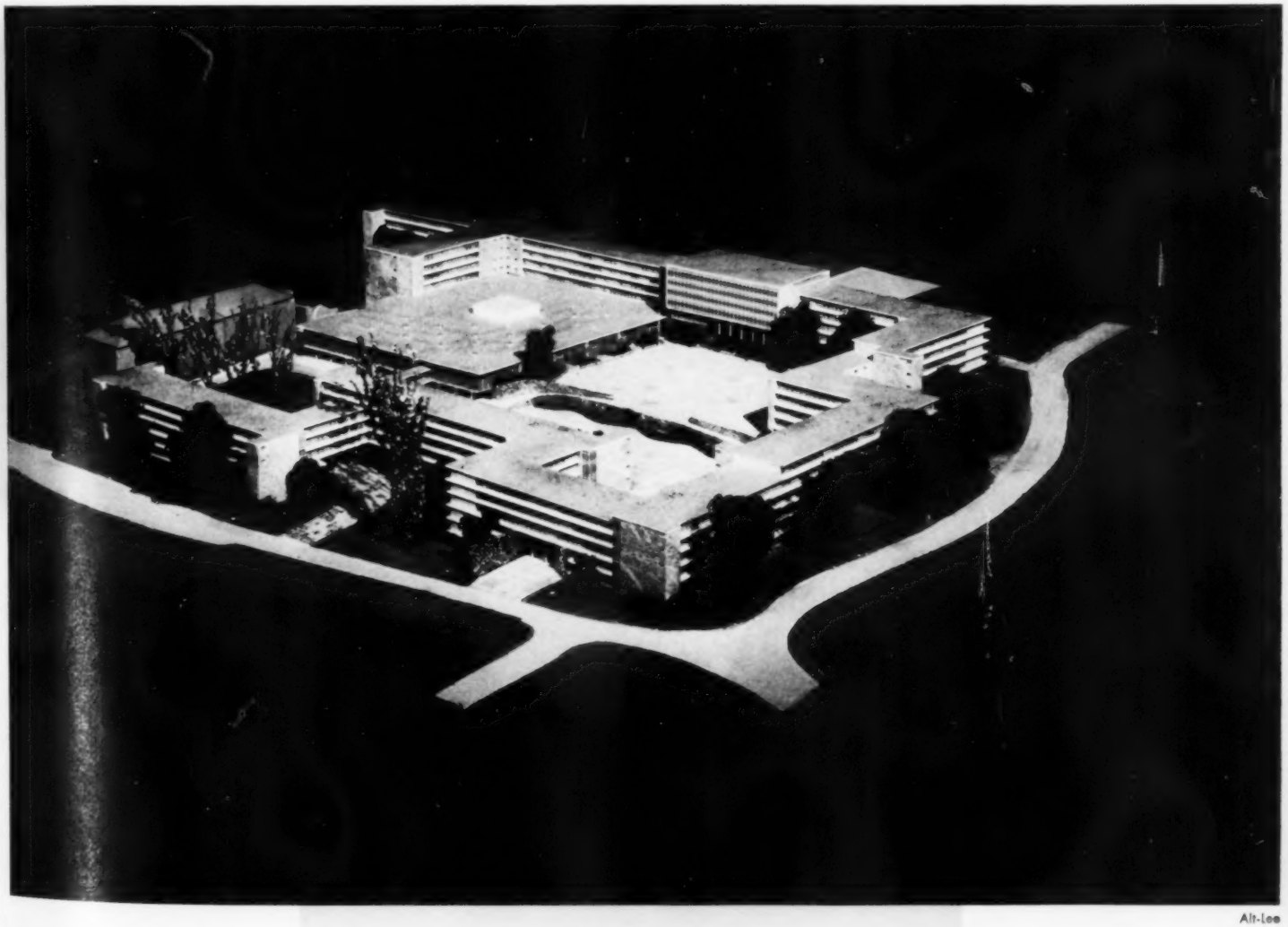
The thinner dormitory buildings are also shown in white; dotted black lines indicate the principal old buildings to be removed in addition to several lesser doomed structures, all shown in the air view of the existing area.

Because it is a military college, Clemson students march in formation into the Mess Hall. The weather sometimes interferes seriously with this custom. The new barracks, though they are treated as a series of building units, are to be internally connected so students can get to meals under cover. There is even to be a bridge which will take advantage of changes in grade to span from an upper dormitory level to the Mess Hall.

The site slopes sharply down to the east. This characteristic is put to work by making the buildings step up the slope, making further distinctions



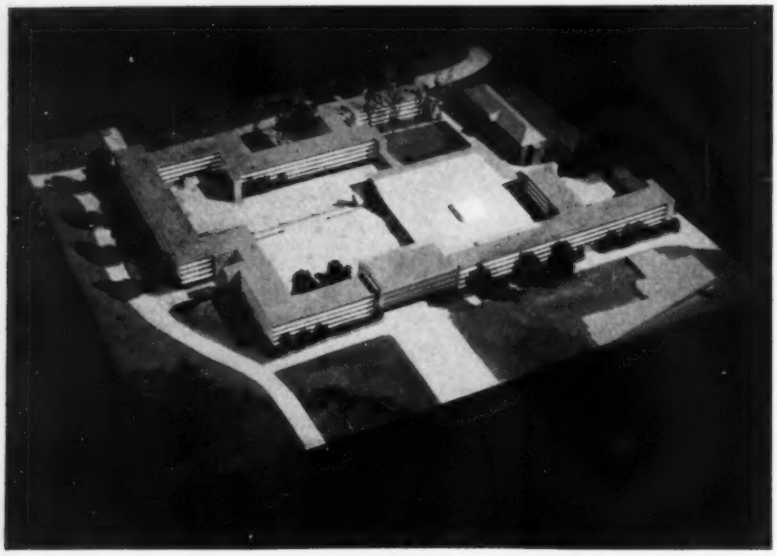
GROUP TO REPLACE OUTMODED BUILDINGS AT CLEMSON



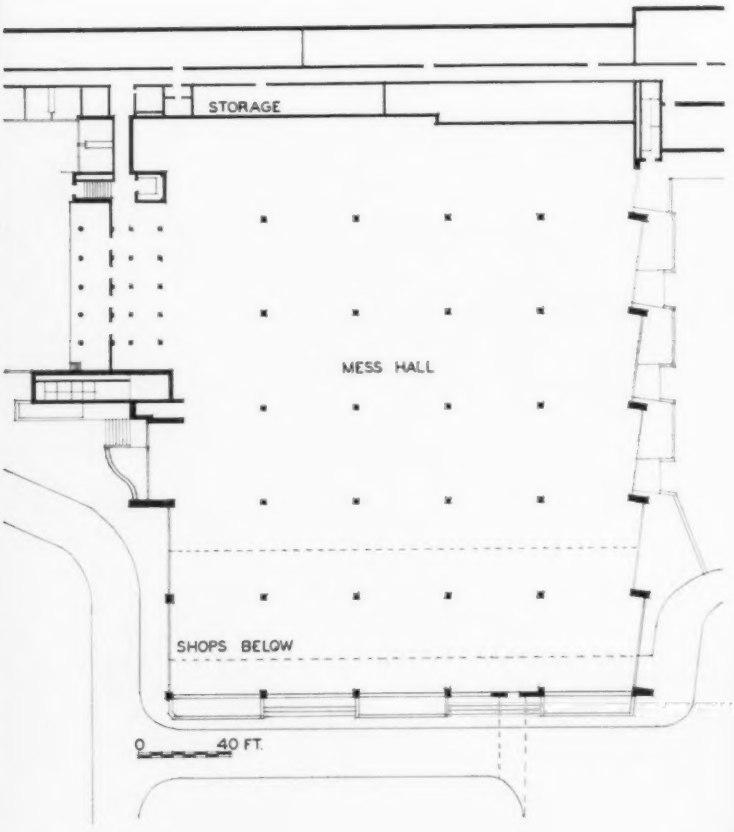
Alt-Lee

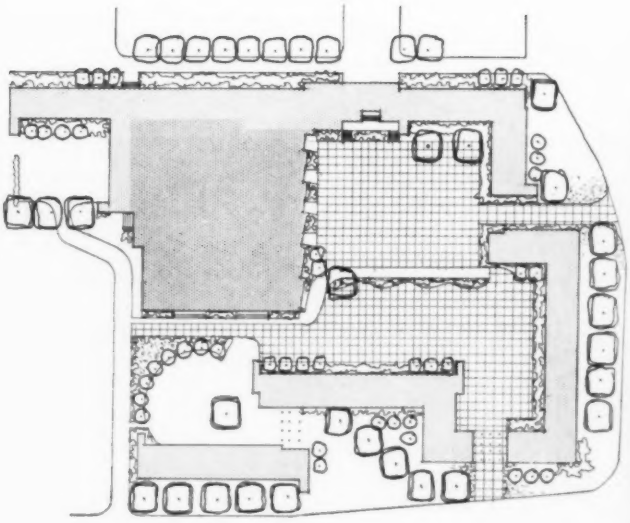
William G. Lyles, Bissett,

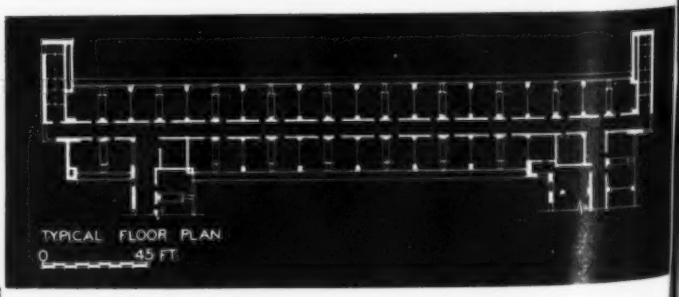
Carlisle & Wolff, Architects and Engineers

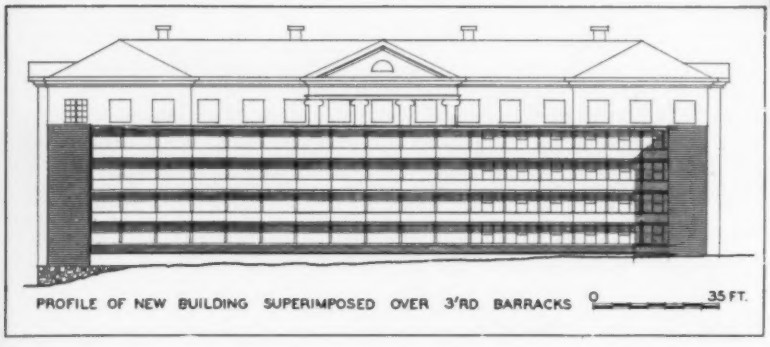


Alt-Lee


STORAGE
MESS HALL
SHOPS BELOW
0 40 FT.



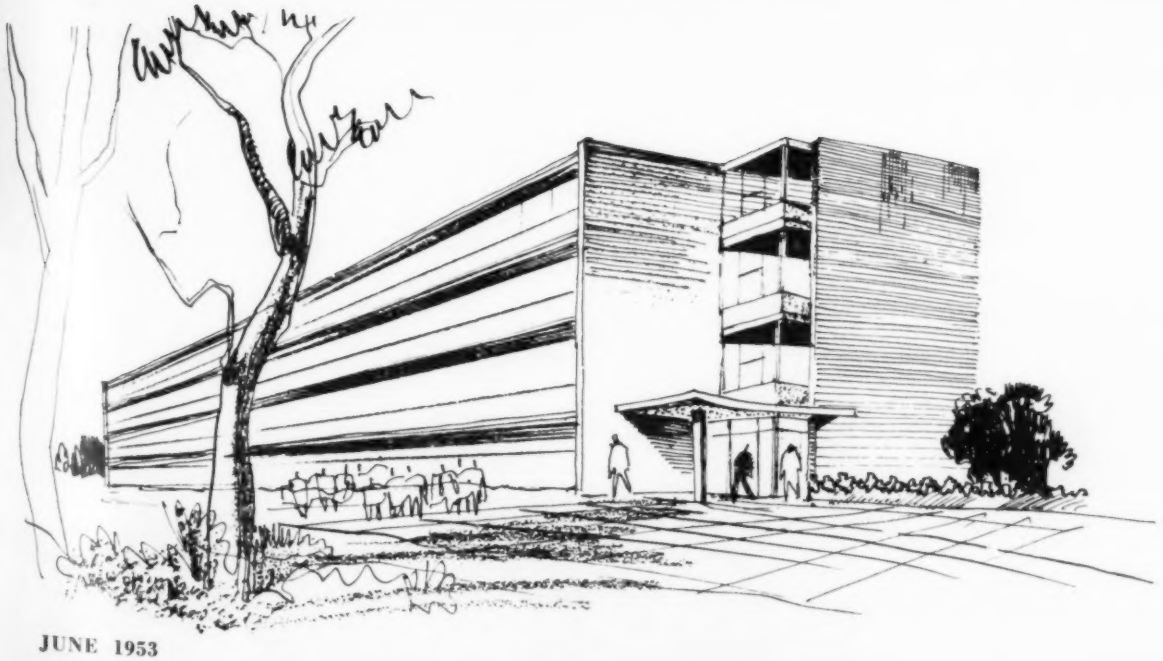

TYPICAL FLOOR PLAN
0 45 FT.


PROFILE OF NEW BUILDING SUPERIMPOSED OVER 3'RD BARRACKS 0 35 FT.

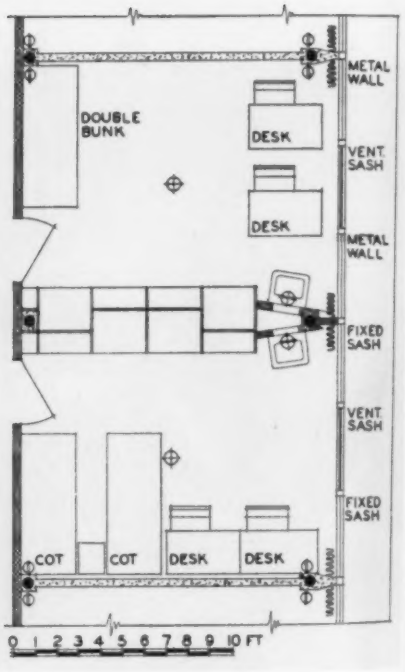
between units. In the main, the buildings will parallel the contours to avoid excessive grading and structural problems.

The large court thus to be enclosed is also designed to utilize existing grades as much as possible. It is to be divided into two levels, separated by masonry walls, ramps and planting, one for the formations of upper classmen, one for lower classmen. At intervals the buildings are to be pierced at ground level by wide entrance loggias.

The decision to raze some buildings, however unsightly, inefficient and expensive to maintain, was not made lightly. The values pro and con were exhaustively studied and numerous comparisons, of which the drawing of a new building superimposed on one of the old is just one of many examples, were made and debated. Efficient planning of dormitory rooms, shown on the following page, makes the smaller volume possible.



CLEMSON BARRACKS



To study and demonstrate the typical dormitory room a full-scale mock-up was built and completely equipped. In plan, rooms are paired with a storage wall (containing wardrobes, dressers, shelving and lavatory) between. Other walls are painted concrete block. Special radiant panels are installed under windows

COLLEGE BUILDINGS: WOMEN'S DORMITORY QUADRANGLE

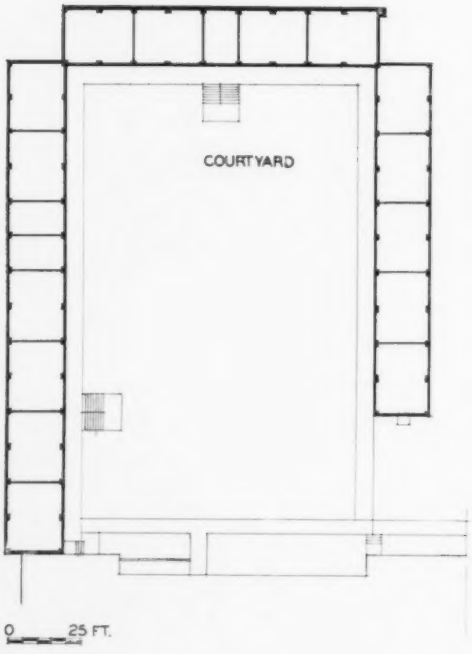
ARIZONA STATE COLLEGE, TEMPE, ARIZ. | *Guirey & Jones, Architects* | *J. E. Hastain, Structural Engineer* | *M. M. Lowry, Mechanical, Electrical Engineer* | *Mary Louise McLeod, Color Consultant*

SIMPLE NEARLY TO AUSTERITY yet serene and most pleasant, Gammage Annex, the new women's dormitory at Arizona State, surrounds three sides of a quadrangle whose present attractiveness is due to increase as grass and trees become better established. The existing building forms the fourth side of the quadrangle, which the three wings of the Annex do not quite enclose.

(*Continued on next page*)

Stuart Weiner

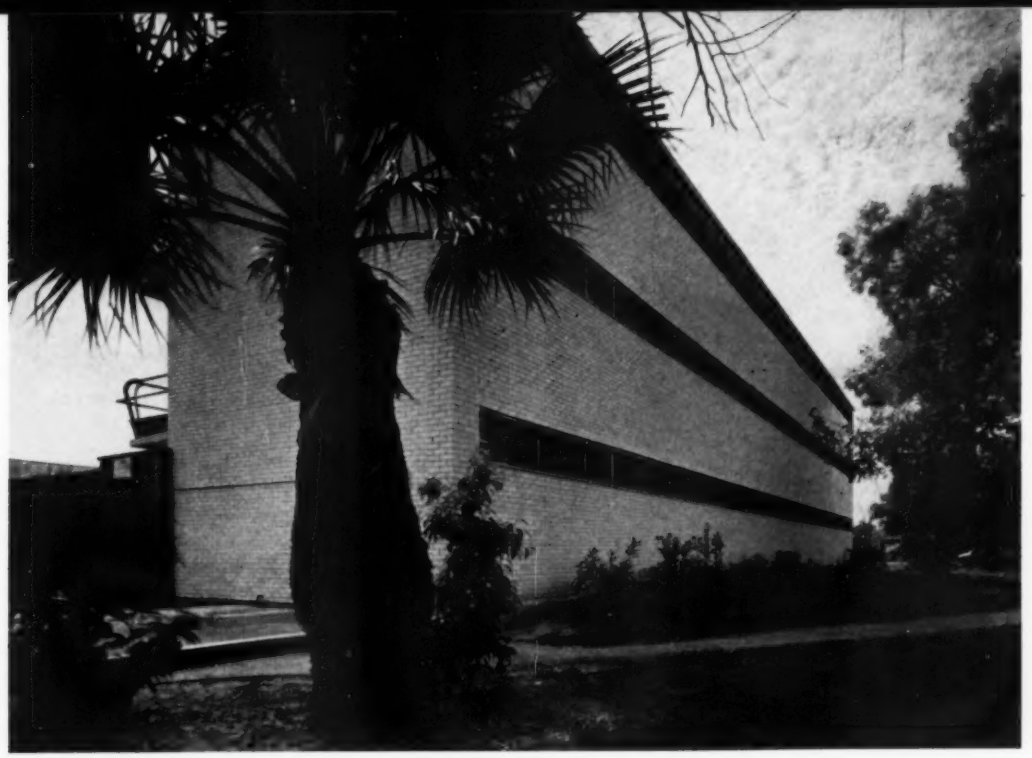
Stuart Weiner



All three wings turn their backs, punctuated only by high rows of windows, on the rest of the campus. Into the privacy of the court, however, all the rooms open hospitably across wide balconies that serve as both sunshades and corridors. There is no waste in this design, and on the other hand it is by no means a concession to poverty. Though the building is liberally enhanced with color, which undoubtedly increases its femininity, the satisfaction it affords depends primarily on the logical disposition — and even exposure — of its elements.

The design module, a four-person dormitory unit (see following pages), is expressed in the plan at left, where the sound-resistant partitions of pumice block are indicated. Upper floors in both two- and three-story wings are similar.

Construction was equally simple and economical. The frame is steel, in bays that are completely repetitive. Floor slabs and roof deck, which cantilever to form the balconies, are concrete. The roof is built-up, with a heat-reflecting surface. Outer walls, except on quadrangle sides, are iron spot face brick. Partitions between units, and spandrels on the court sides, are painted pumice block; other interior partitions are painted plywood. Glazed structural tile is used in baths. Ceilings are vermiculite plaster; floors, asphalt tile. Sash are wood, in station-wagon guides. Insulation is mineral wool. Heating is provided by the college plant; air washers were built specially.

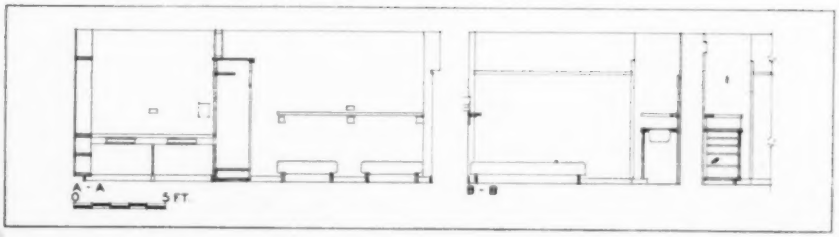


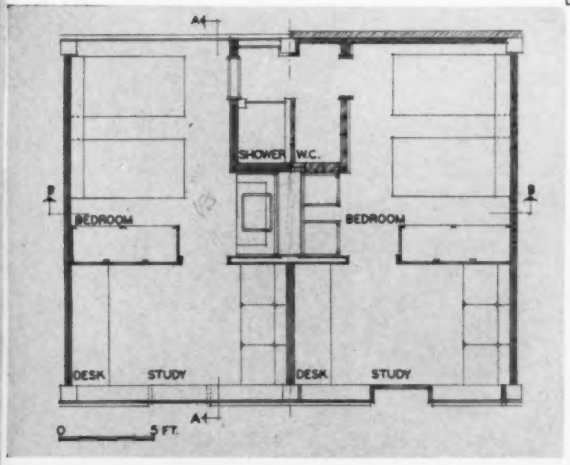
The three wings open generously to the interior quadrangle. The concrete floor and roof slabs overhang to serve as balconies, sunshades and corridors; there are no internal corridors. The unity and privacy of the quadrangle are enhanced by the narrow strip-windows which the dormitory presents to the outer world

The dormitory unit, extremely simple and economical of space, with pleasantly colorful painted block and plywood wall surfaces, is the building's module. It consists of two double bedrooms and two studies paired about a utility wall. Against this wall in each bedroom is a recess containing two built-in dressers with a lavatory set into the counter-top. A single bath-

COLLEGE BUILDINGS: ARIZONA STATE

room, containing shower and water closet, is accessible from both bedrooms. Beds are springs and mattresses on a lumber base. Only portable furniture: two chairs per desk



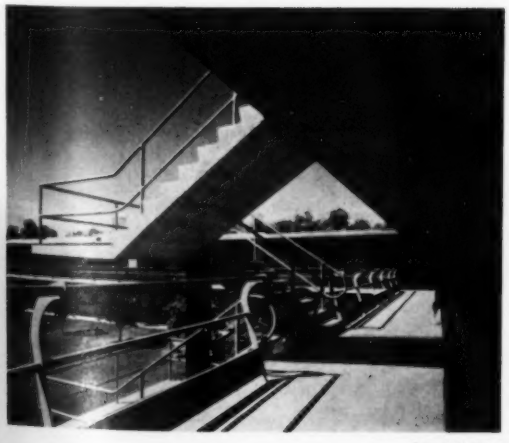


Study has double built-in desk

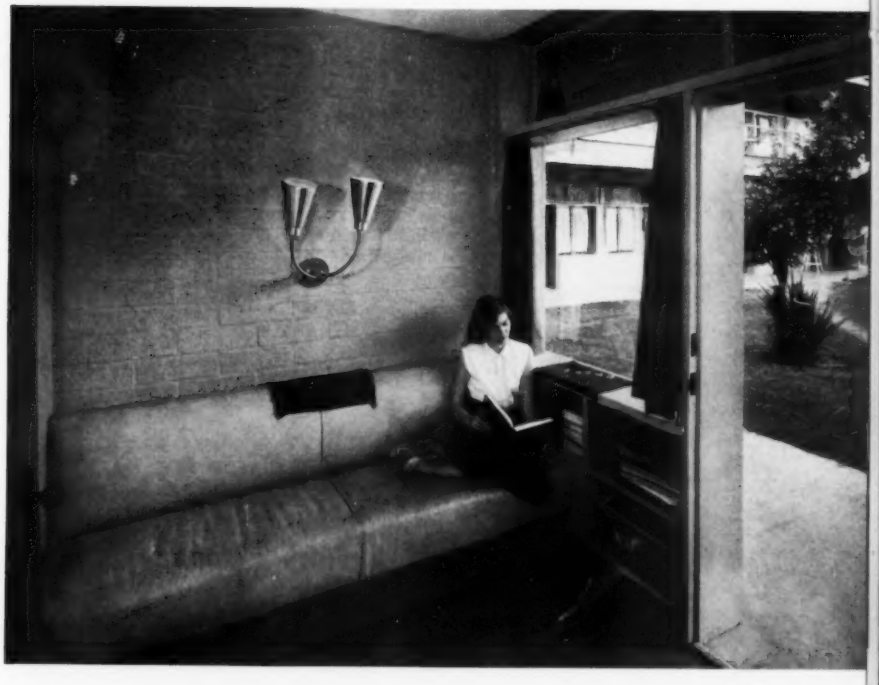
Bedroom; utility wall at left

Looking through bath

Above, wardrobe forms wall between bedroom and study, below

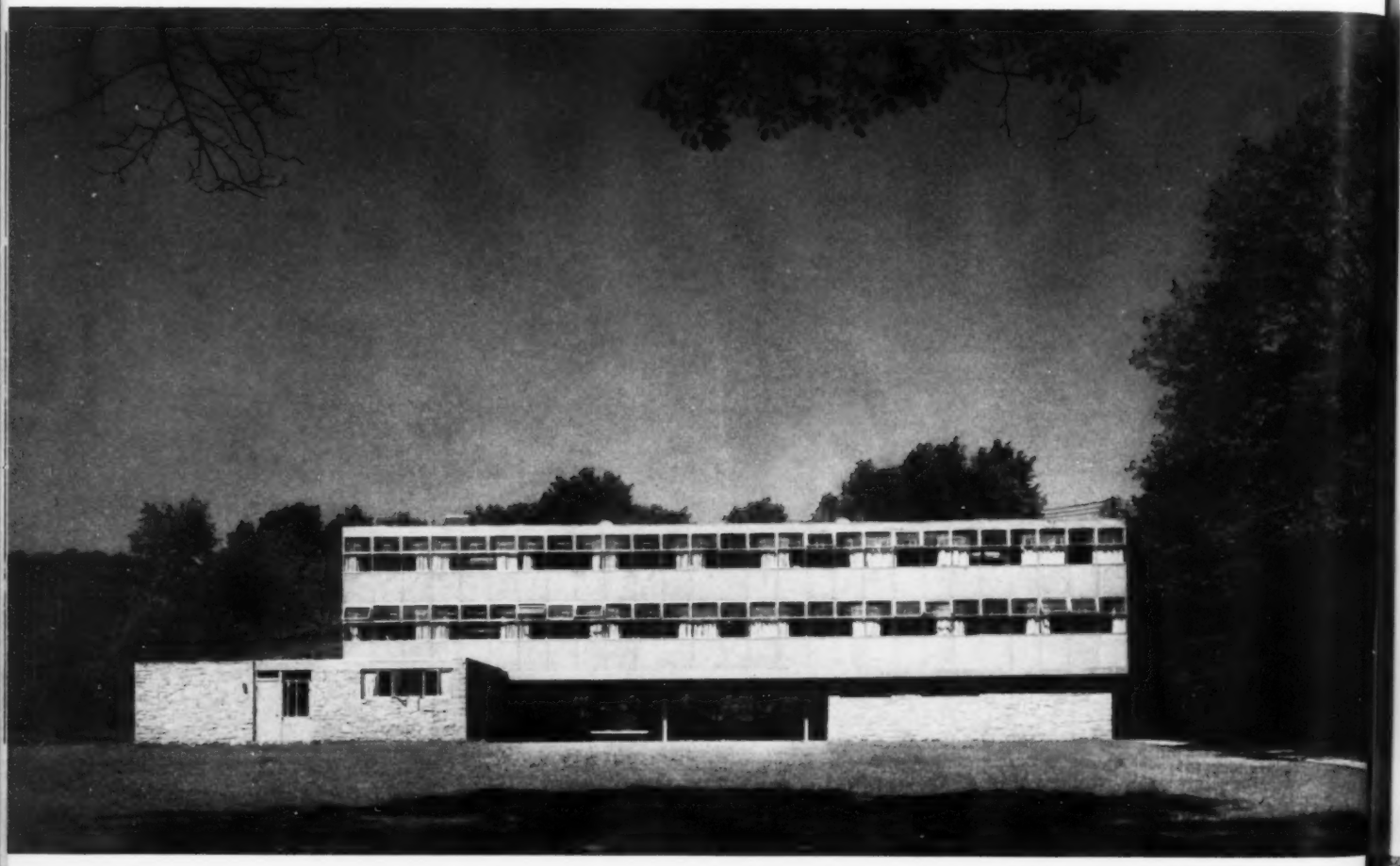


Stuart Weiner



DORMITORY, KISKIMINETAS SPRINGS SCHOOL

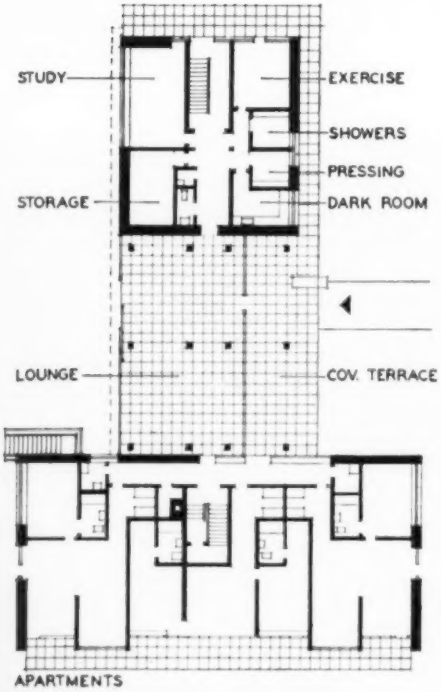
SALTSBURG, PA. — *Hunter, Caldwell & Campbell, Architects*



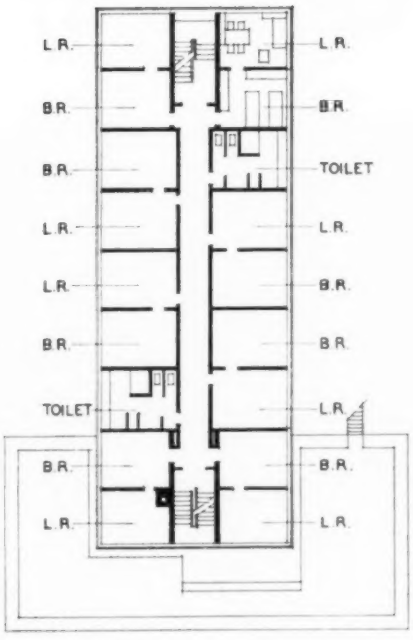
AT FORWARD-LOOKING KISKI preparatory school, the new dormitory is as interesting as the plan of study. On this wooded campus the boys concentrate on a single subject for nine weeks, cover four subjects each year, with results gratifying to both teachers and pupils.

Equally successful is this dormitory, the realization of such design studies as the model shown in the photograph at right, which was first published in ARCHITECTURAL RECORD, June 1950. The overall building program for the future includes five more such dormitories, a field house, chapel, and dining commons. The present unit has a glass-walled lounge on the ground floor which yields a vista through the building. Also on the ground floor are faculty apartments and activities rooms.

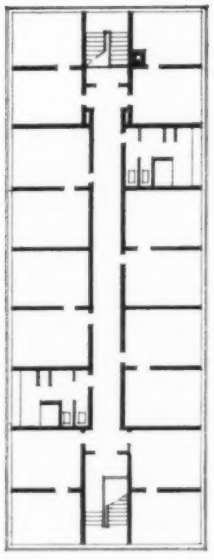
Second and third floors contain two-room apartments for 64 boys, four to a suite, 32 to a floor. The above-ground location achieves privacy and affords pleasant views. Finishes are practical and economical: acoustic tile ceilings, painted block walls, asphalt tile floors. Beds are double-decker; dresser, wardrobe, bookcases are built-in.



APARTMENTS
GROUND FLOOR



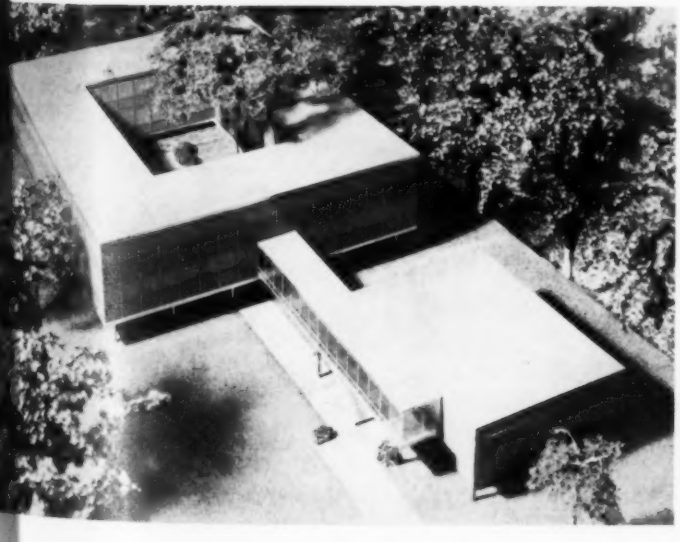
FIRST FLOOR



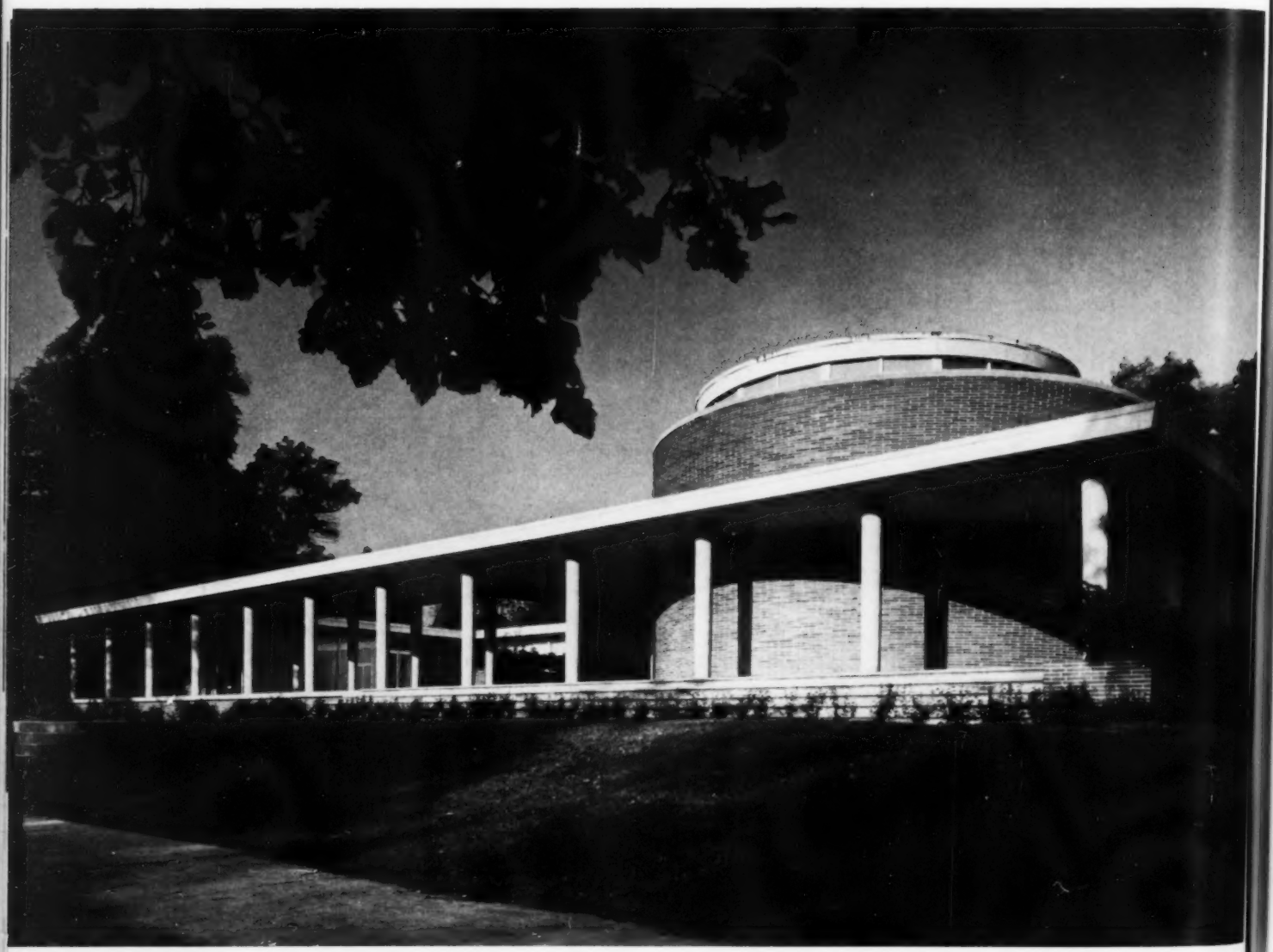
SECOND FLOOR

Exterior skin of upper stories is blue-green glass in aluminum frames, with projected sash for ventilation. Frame is light steel; floors are radiant heated concrete slabs. Photos at right: faculty apartments, easily accessible, control students' comings and goings

Robert Lautman



COLLEGE BUILDINGS: TWO CAMPUS RELIGIOUS AN



Hedrich-Blessing

EVANSTON CONGREGATION HILLEL

DESIGNED IN 1947 and first published in ARCHITECTURAL RECORD in June 1948, this building provides a center for religious, cultural and interfaith activities of the Jewish community at Evanston, Illinois, and for Jewish students at Northwestern University. It is duplicated in purposes and essential parts by the Benjamin M. Frankel Memorial at Champaign, shown on succeeding pages. Both were designed and built nearly simultaneously, antedating considerably the very similar cylindrical chapel designed (but not yet built) for the M.I.T. campus by Eero Saarinen.

The Evanston site has many trees. To take advantage of a view of Lake Michigan to the east, the entire structure is built on a platform raised three feet above the surrounding grade. Its several units are developed as contemporary expressions of historic elements of the Jewish temple, and incorporate also the facilities needed by a modern community center.

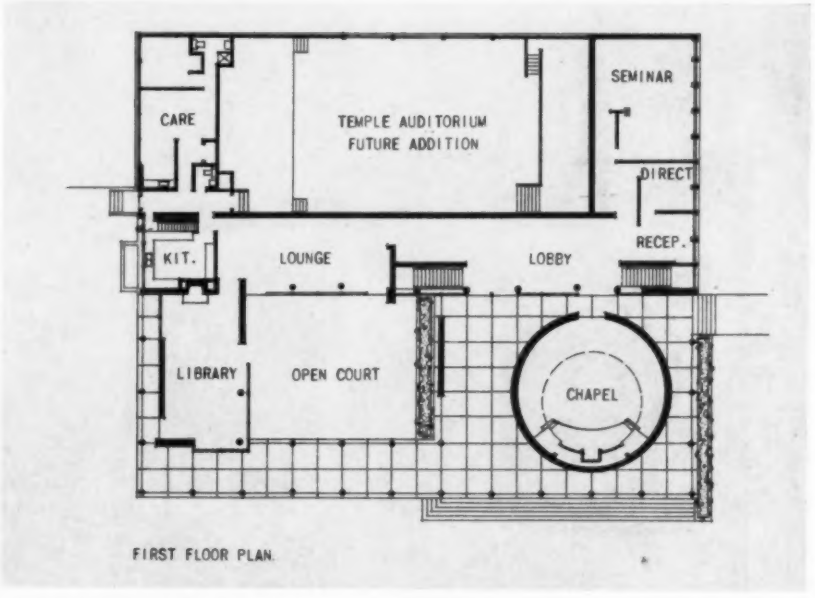
US AND SOCIAL CENTERS

Harrison & Abramovitz, Architects

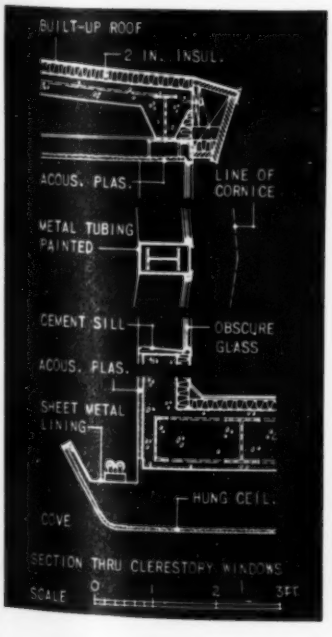
Edwards & Hjorth, Structural Engineers

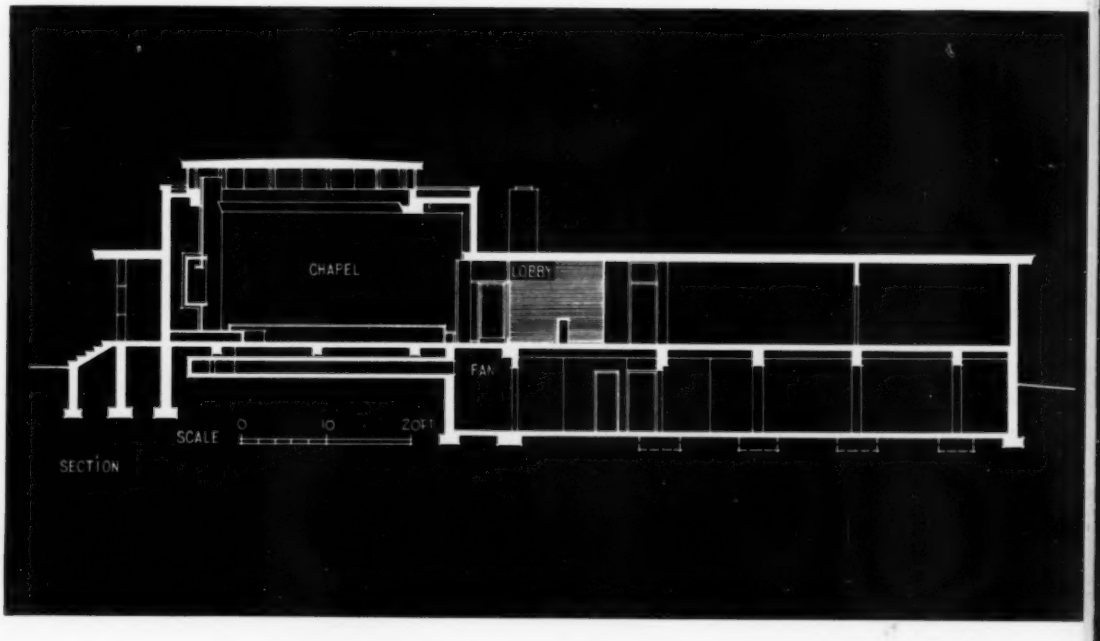
Jaros, Baum & Bolles, Mechanical Engineers

Smith & Silverman, Electrical Engineers



FIRST FLOOR PLAN.

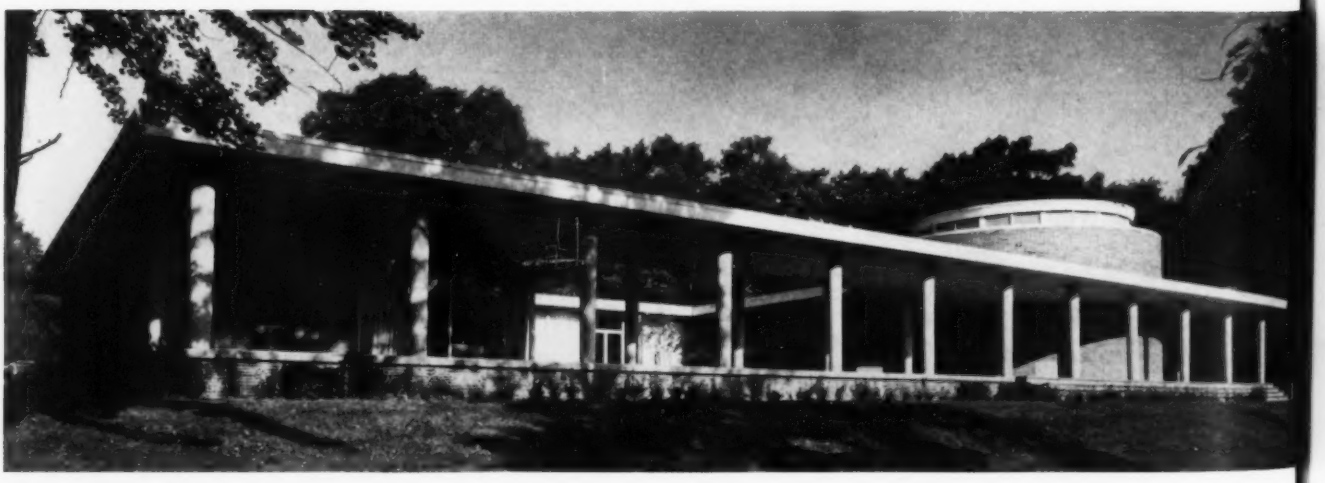




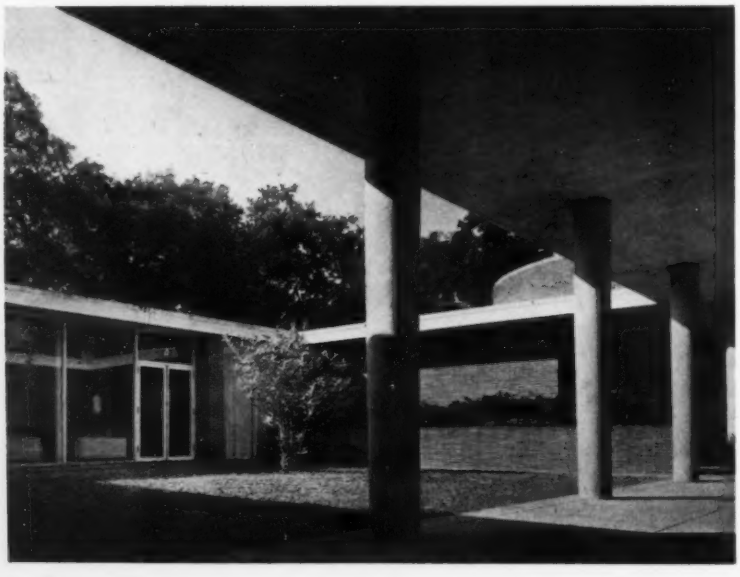
COLLEGE BUILDINGS:

NORTHWESTERN UNIVERSITY

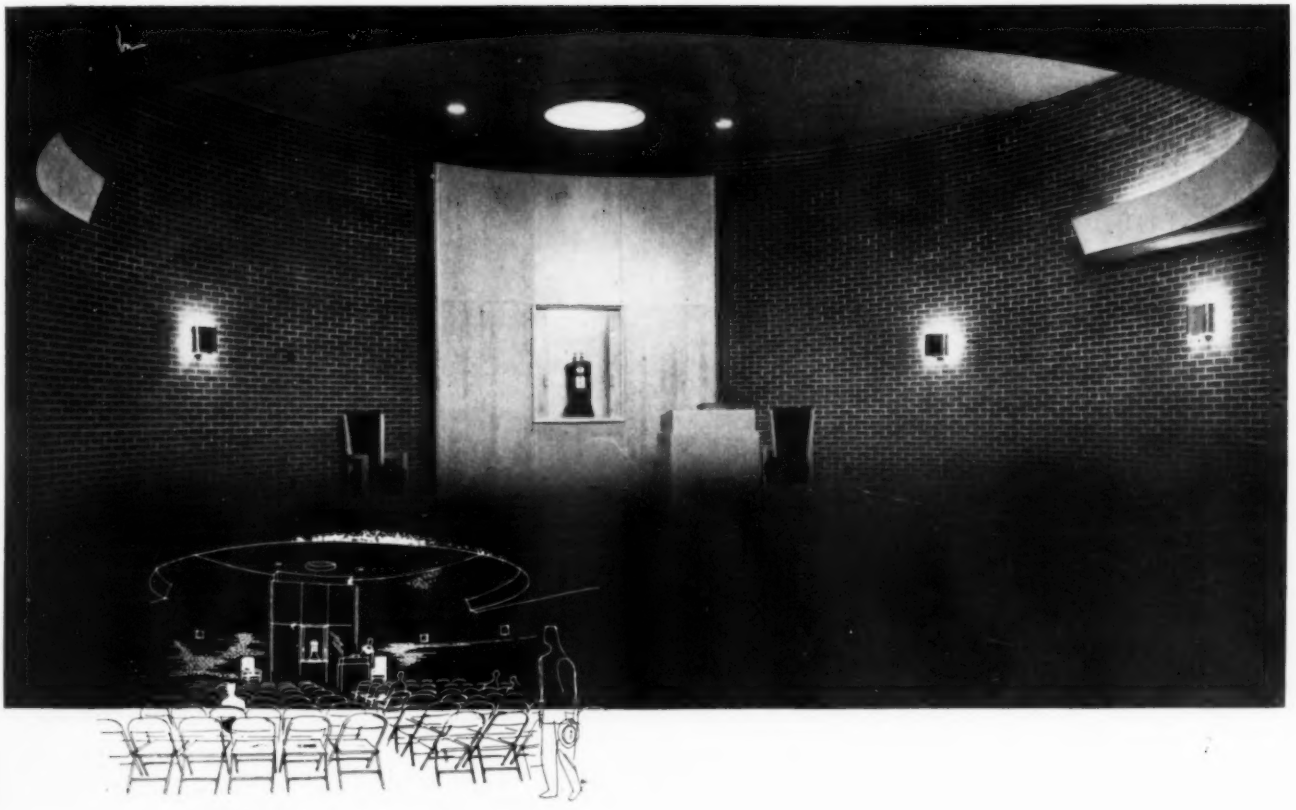
Above, the lounge opens a glass wall to the historic courtyard, helping to integrate social and religious significances. Center of page, columned loggia forms covered approach to library while recalling the portico of an ancient temple



Below, looking from loggia into the sequestered "Courtyard of the Lord." Materials are simple brick and concrete; framing, steel

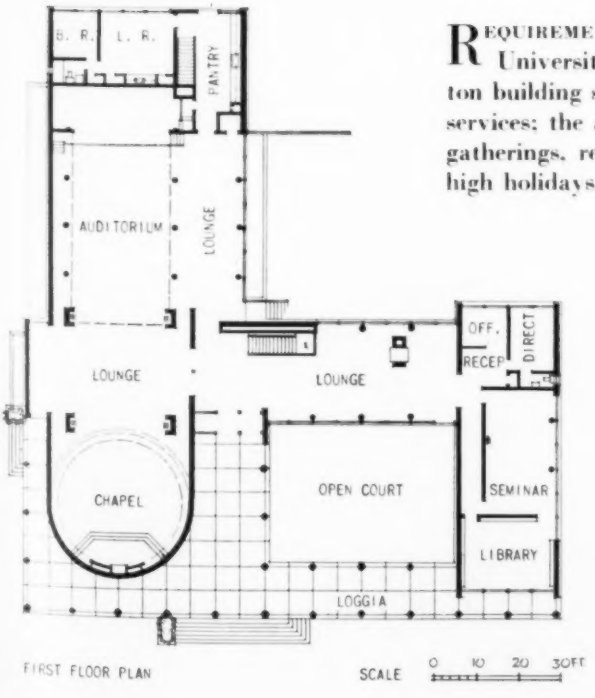


Hedrich-Blessing



BENJAMIN M. FRANKEL MEMORIAL BUILDING

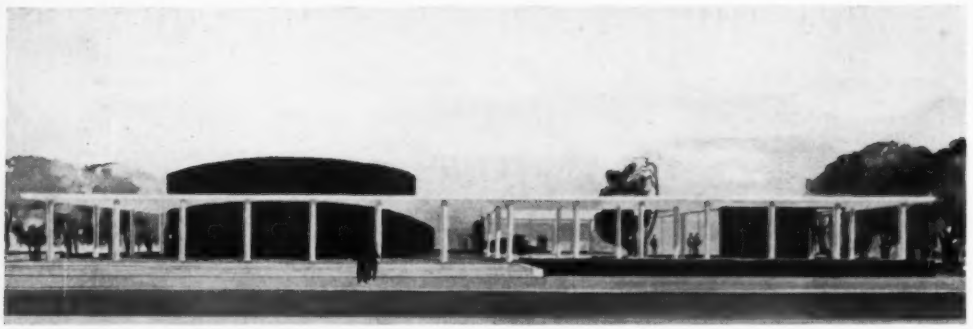
Harrison & Abramovitz, Architects
Tuck & Eipel, Structural Engineers
Jaros, Baum & Bolles, Mechanical Engineers
Smith & Silverman, Electrical Engineers



FIRST FLOOR PLAN

REQUIREMENTS for this Hillel center at Champaign, Illinois, serving the University of Illinois, were virtually identical with those at the Evanston building shown on preceding pages. The chapel seats 100 for religious services; the auditorium accommodates 300 for lectures, dramatics, social gatherings, recreation, and also for the larger attendance at services on high holidays. Seminar rooms, library and social rooms are used by both

Construction of the Hillel center at Champaign, like that at Evanston, is steel frame, brick and concrete. Interior surfaces are plaster and brick, painted; floors are asphalt tile. Each building has its own heating plant



UNIVERSITY OF ILLINOIS

students and the community. From the kitchen suppers and teas are served; there are caretaker's and administrative suites. Partly surrounded by these areas and partly enclosed by a loggia is the Courtyard of the Lord, an unroofed grassy garden of traditional origin, used in connection with religious festivals.

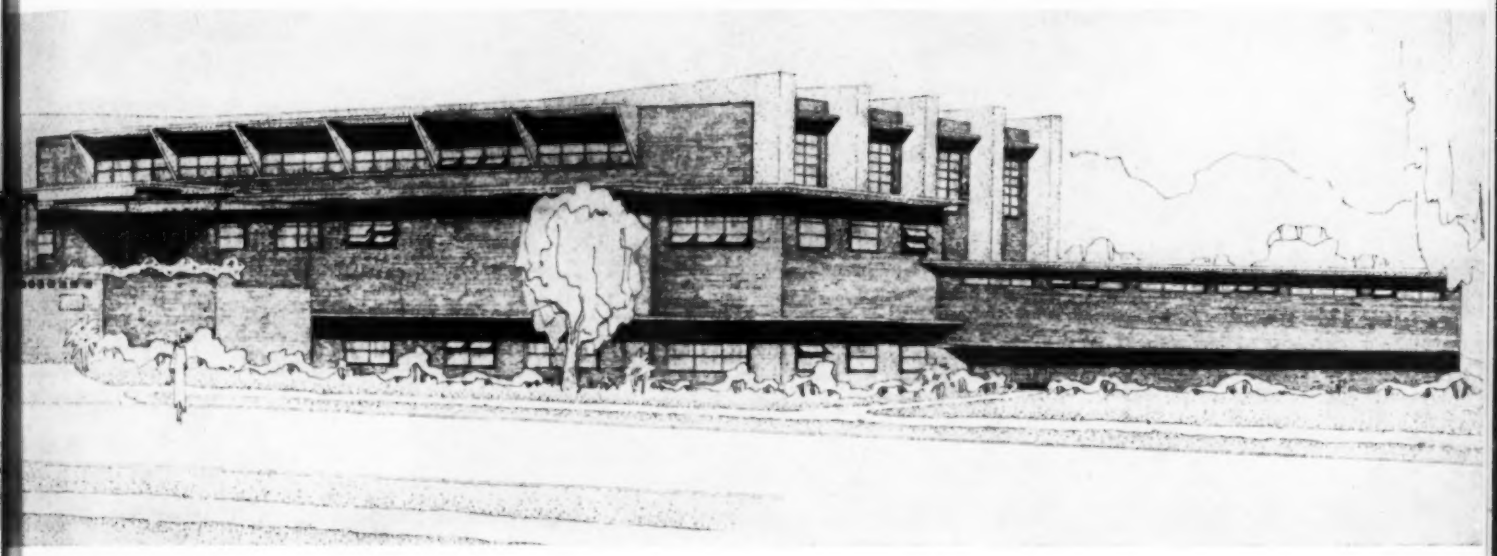
The chapels of both centers are circular and the other elements are similarly disposed. The round form, in the comfort and privacy it gives to worshippers, recalls the variously shaped holy places of Jewish temples in Asia Minor. There are differences between the two centers, of course; not only those dictated by site and orientation, but also one chapel is a free-standing cylinder, the other is only partly so. As photographs, drawings and details show, natural light is diffused across the ceiling of the Evanston chapel while the Champaign chapel is artificially lit. At Evanston the one lounge has only one wall glazed and the auditorium area is not yet completed; at Champaign the two lounges are each open on both sides and the auditorium is finished.

Hedrich-Blessing

COLLEGE BU

WOMAN'S COLLEGE
UNIVERSITY OF N. C.

Edward Loewenstein, Archit
Watson & Hart, Engineers

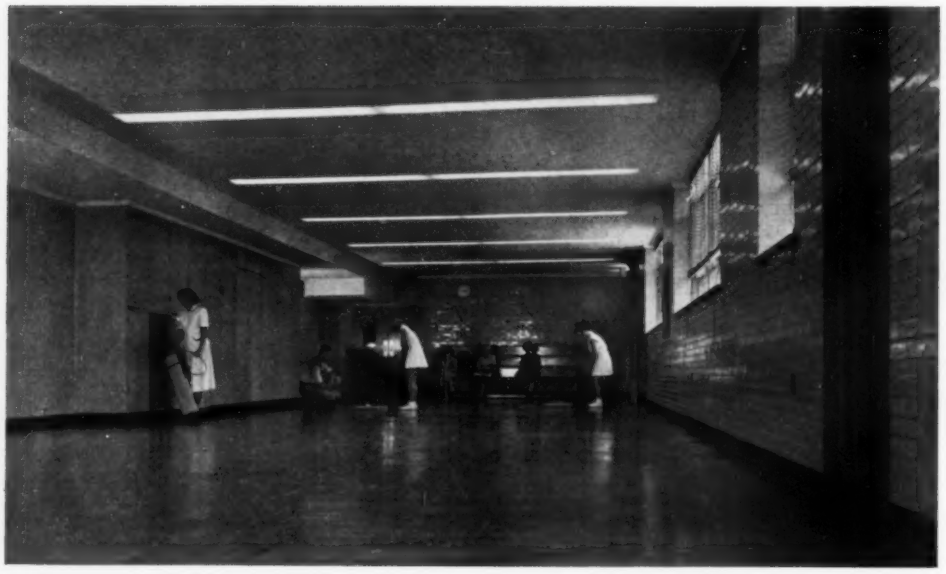


BUILDINGS: NEW PHYSICAL EDUCATION BUILDING

ACTUALLY AN ADDITION to an existing building to which it is joined by an enclosed passage, this structure was designed within strict limits set by the State Legislature. Total volume, 798,085 cu ft, was within the 800,000 permitted. Cost was $11.06 per sq ft, $0.91 per cu ft. The design program was determined in consultation with the Head of the Department, Miss Ethel Martus, and her staff. The teaching program includes dancing, bowling, games, etc. The college, though it has no intercollegiate athletic program, engages in meets with neighboring women's colleges. The building is also used for social functions.

Joseph W. Molitor

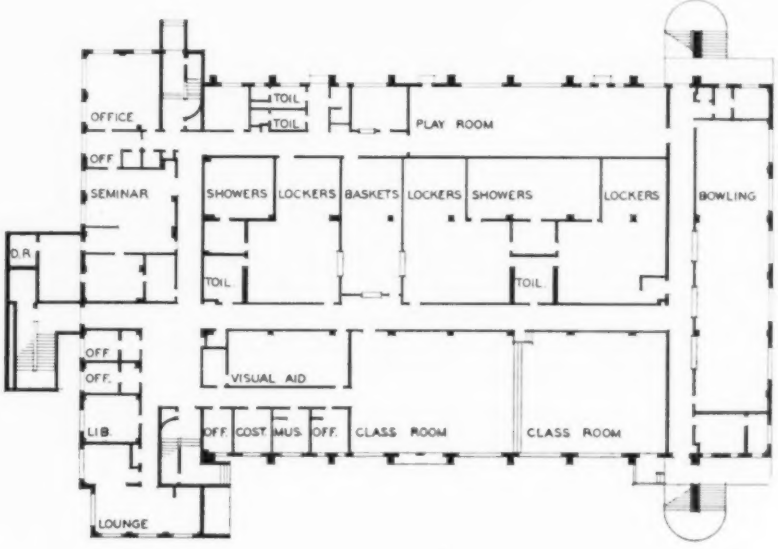
Front entrance (left) is reached via a concrete "bridge." Rigid steel frames spanning gymnasium (right) are exposed to reduce total cubage, covered with Gunite, blown on



PRACTICE GOLF RANGE

BOWLING ALLEYS

BASKETS, LOCKERS



Finish materials were selected for low maintenance. Most interior partitions are glazed brick, with common brick in equipment and service rooms. Toilet partitions and shower stalls are ceiling mounted, fixtures wall mounted

SEMINAR

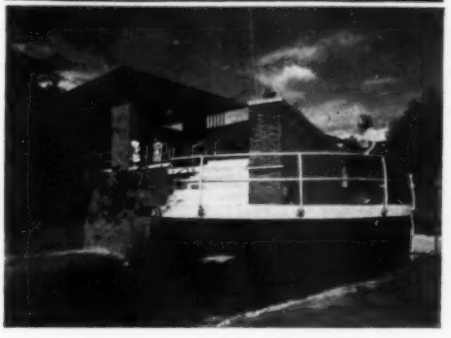
VISUAL AIDS

DANCE STUDIOS

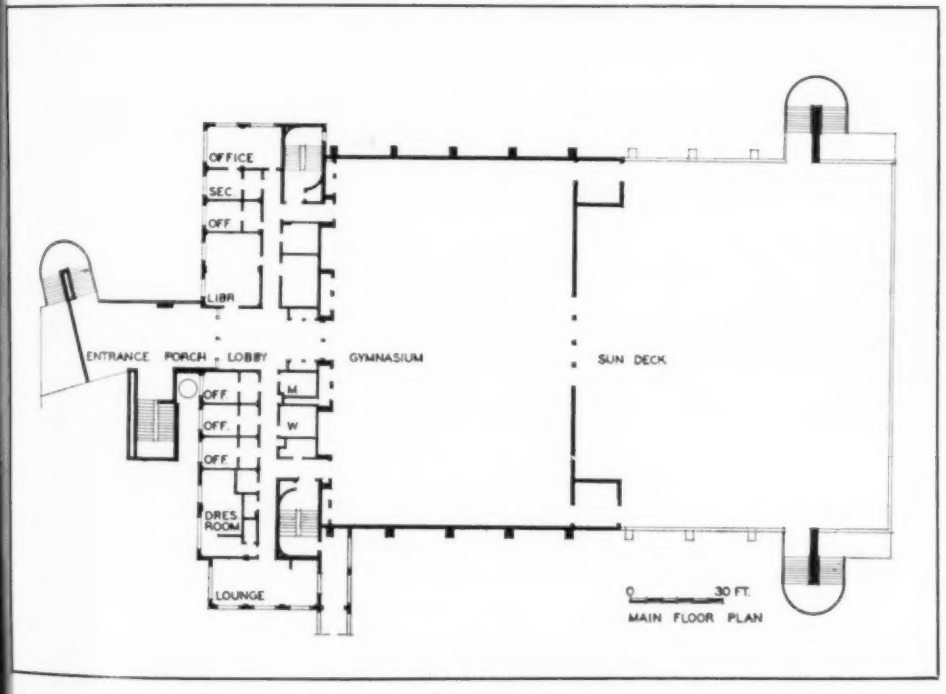
CORRECTIVE GYMNASIUM

Lounges (lower floor) have small kitchens adjacent. Terrace (photo below), used for roller skating, dances, games, has terrazzo floor over a sand cushion, with a membrane-waterproofed concrete slab beneath

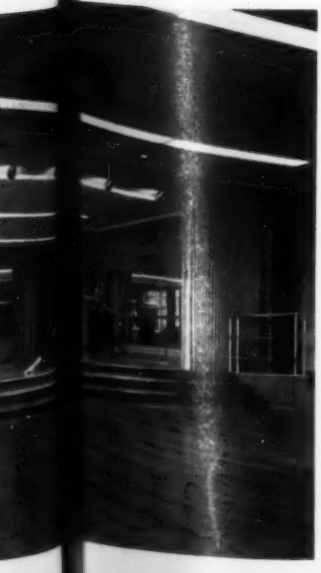
LOUNGE



ROOF TERRACE

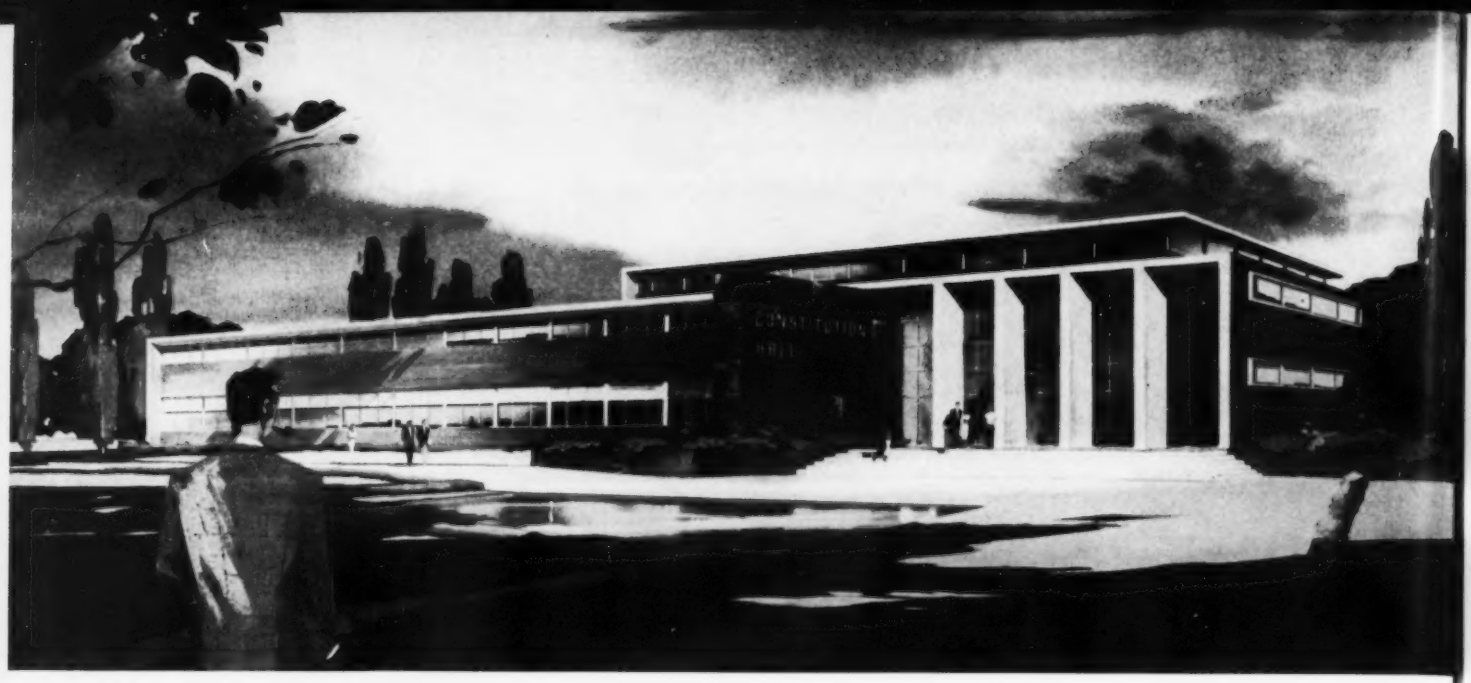


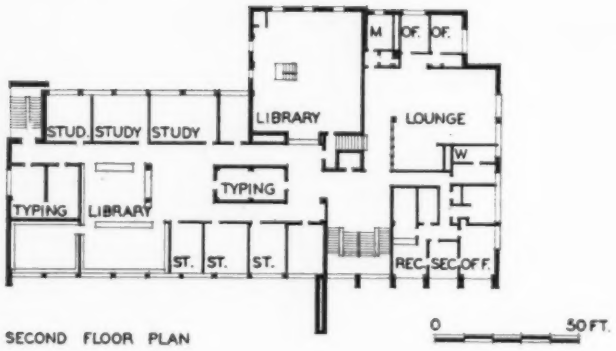
Gymnasium (main floor) has sound-deadened maple floor, metal pan acoustic ceiling, recessed incandescent lights with tempered glass lenses. Sound system has speakers concealed in ceiling; pan perforations are speaker outlets



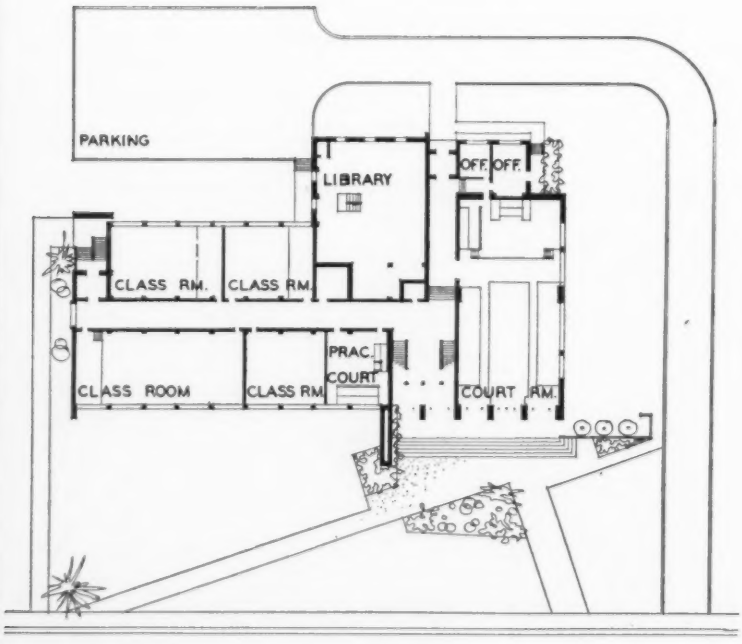
Joseph W. Molitor

ENTRANCE LOBBY





SECOND FLOOR PLAN



FIRST FLOOR PLAN

COLLEGE BUILDINGS:

BAYLOR, one of the oldest educational institutions in the Southwest, was chartered to the Baptist Church by the Republic of Texas in 1845. As a private, denominational school, it is not expected to reach the size of the average tax-supported college. Its total present enrollment is approximately 5000, of whom about 200 are students in the Law School. The new Law Building is just getting under construction.

No fixed architectural concepts are evident on the Baylor campus; each building is more or less accurately dated by its appearance; many of the buildings were erected in 1870. Recently the values of superficial style and exterior appearance have been — as they continue to be — hotly debated on the campus. This lack of a mold to conform to proved helpful in designing the Law Building, whose exterior is a clear expression of its interior parts.

The familiarly tight budget also affected design by dictating simplicity and virtually prohibiting the monumental use of space. Excluding land, the total cost is expected to fall within $600,000. In holding to the budget, determining essential requirements, preparing the program and reaching such decisions as settling on a red brick and stone exterior (the colors of adjacent buildings), the architects acknowledge invaluable help from the chairman of the building com-

mittee, Dean A. V. McCall, and other committee members.

The design program was in many respects like that of any professional college or university department, but no clear statement of principles of organization, or of desirable types and sizes of spaces, could be found. Examining the usual source materials provided little inspiration. Visits to other law schools were disappointing. Only after painstaking analysis of the school's actual operation did the pattern of activity, involving research, discussion, recitation, lectures and practice, plus school administration and student activities, become apparent. These were translated into space requirements: library and bookstack area accessible to all the other parts; student lounge, which meets requirements of the American Bar Association as a place for free discussion of legal principles and problems; classrooms; a small practice court room; a large (270-seat) court room used also for lectures to the entire student body, as an assembly room, and for some public functions; administrative offices, faculty offices, and offices for student affairs. A legal aid section, initially considered, was later dropped after much discussion.

THIRD FLOOR PLAN
0 50 FT.

NEW LAW SCHOOL, BAYLOR UNIVERSITY, WACO, TEX.

Stanley W. Bliss, Architect

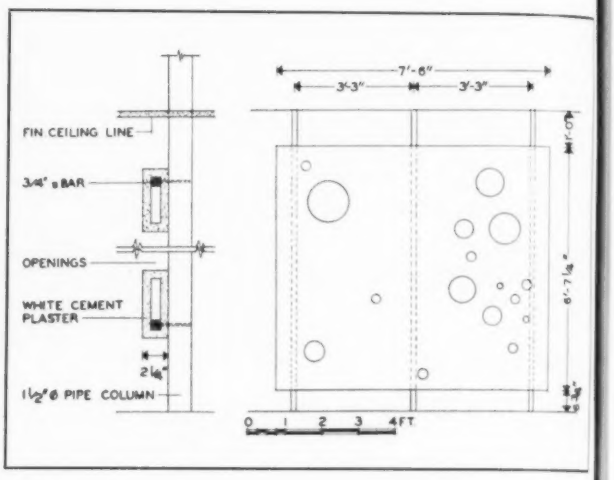
Herman A. Kelling, Associate

At many times the entire student body will be in the building at once, in classrooms, practice court or assembly room. Hence these divisions were placed on the first floor, directly accessible from outdoors. The noise incident to changing classes, etc., is thus confined to one area. Most of the second floor is library area, of which much consists of small study rooms to permit concentration and also permit small groups to discuss and study legal subjects without causing disturbance. Two soundproof rooms provide table space for typing close to reference sources. In book-stack areas are carrels for students, faculty and visiting researchers.

Air conditioning was considered essential for the climate. Due to varying loads and seasonal use of parts of the building, the system is zoned. The same water is chilled in summer and heated in winter by a central unit in the basement, then distributed to air treatment units in the various sections of the building.

"IT HAS BEEN DISCOVERED," says an eminent trustee of an eastern college, "that only in the United States . . . have college buildings been designed in any but contemporary style." In realistic programming and in esthetic conception our college buildings are catching up to both the needs and desires of college students.

UPPER-FLOOR



Offices for the Marquette Cement Company

Jackson, Mississippi

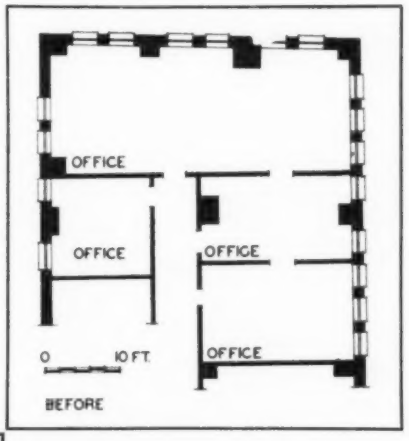
Joseph W. Molitor

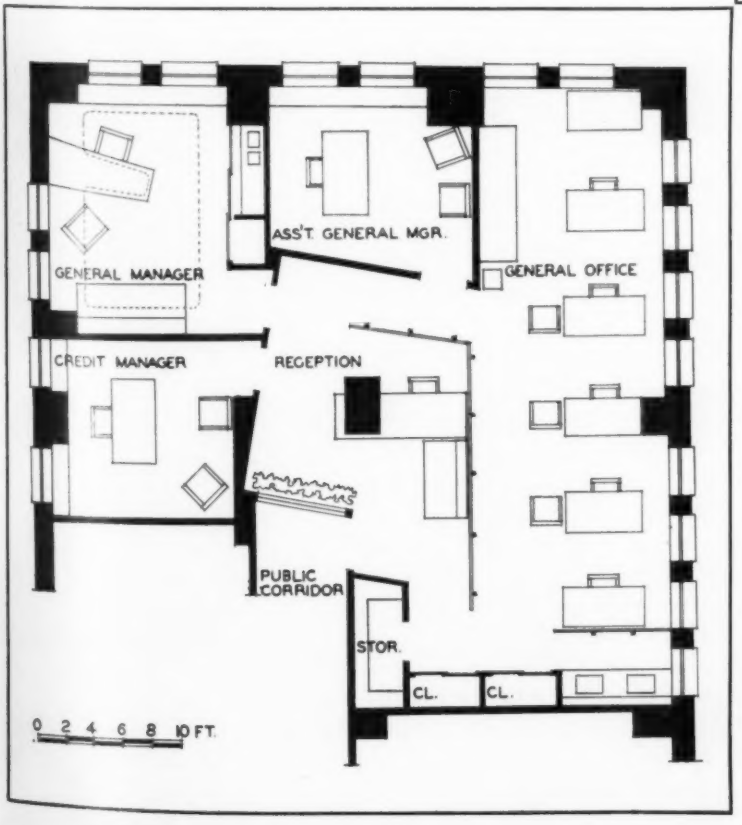
OFFICE INVITES PUBLIC VIEW

The conversion of approximately 1420 sq ft of typical office building space into the kind of offices the Marquette Company wanted for its Jackson headquarters won the architect a well-earned Award of Merit at last October's convention of the Gulf States Region, A.I.A. The problem was complicated by Marquette's major requirement: the office must attract public attention and be visible in part from the elevator lobby even though the space leased was on an upper floor and at the far end of the public corridor. The area provided, furthermore, was barely adequate to accommodate the required reception room, general office, and three private offices — one of the latter large enough to double as a conference room and to be equipped with a bar for use in client entertaining. *And* — there was a large concrete column, load-bearing and non-removable, in almost the exact center of the rented area.

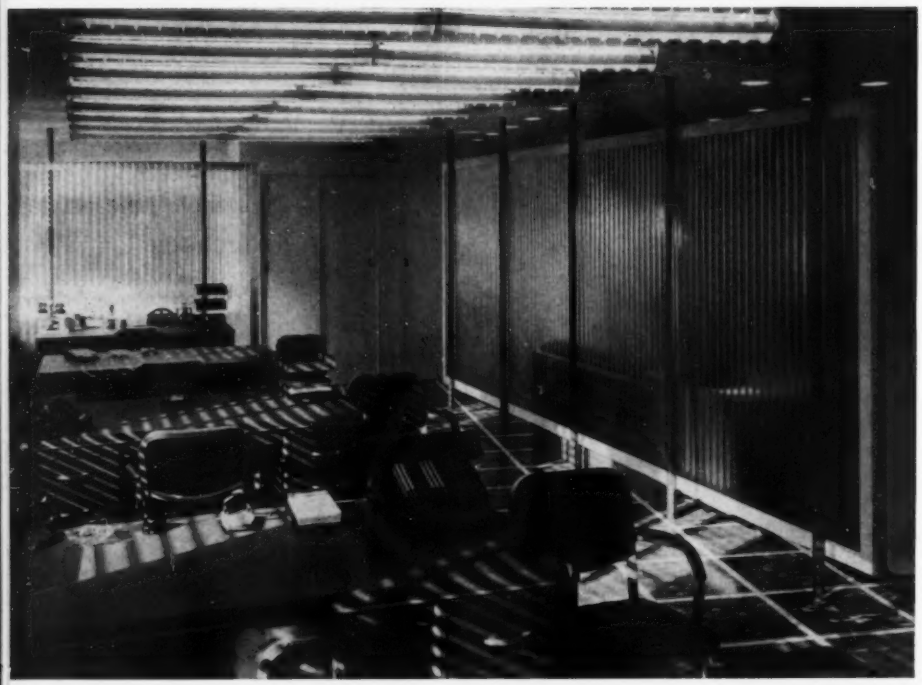
Since the reception room was the only part of the office which logically could be exposed to public view, its position at the end of the corridor was inevitable. An entrance wall of clear glass extending the full width of the

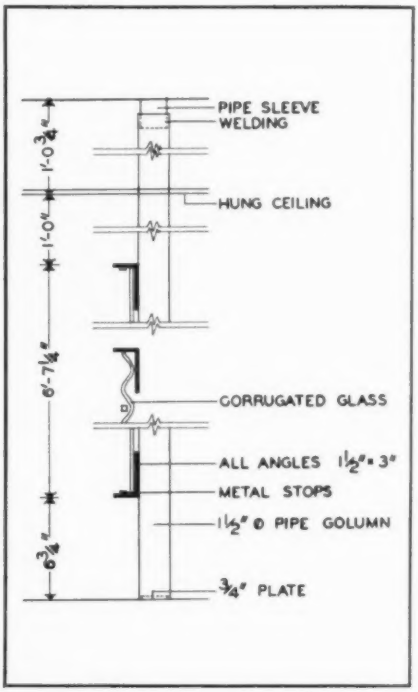
James T. Canizaro, Architect — Engineer





Floors in reception room and general office are covered in green and white rubber tile; walls are light green, ceilings bright yellow. Corrugated cement-asbestos board covering column in reception room is dark green, columns of general office partition are rust-colored, as is reception room couch. Decorative panel of cement plaster (detail opposite) behind desk advertises company's product, increases privacy of executive offices. Desk and couch in reception room were designed by architect, most other furniture selected by him

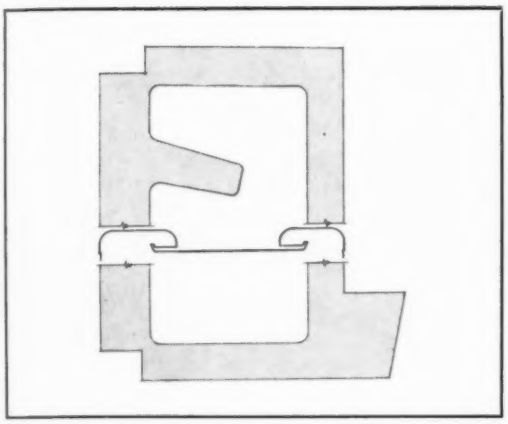




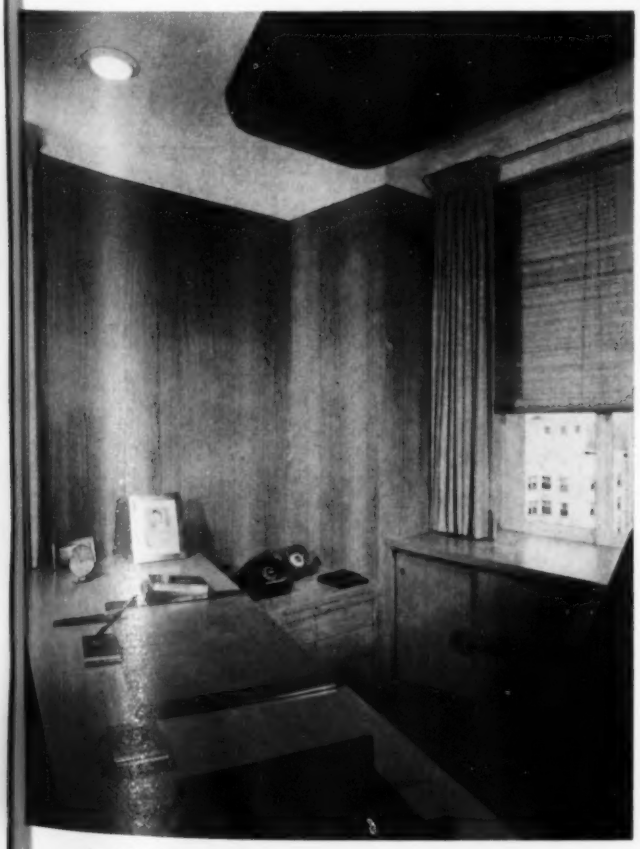
Behind corrugated glass partition at end of general office is a cabinet containing two lavatories and individual storage space for each employee's toilet articles; clothes closets are adjacent

corridor allows roughly half of this area to be seen from the elevator lobby. The receptionist, however, is no goldfish-in-a-bowl; she is protected by the awkwardly placed structural column, now covered with corrugated cement-asbestos board and incorporated into the design of the reception desk. A decorative panel of cement plaster behind the desk advertises the company's product and at the same time increases the privacy of the offices at the rear of the reception area.

Since not one inch of floor space could be wasted, the partitions separating the private offices and the reception room were angled to give each office as much room as possible. The partition between the general office and the reception room is of corrugated glass, with a foot of open space at top and bottom, providing the central area with natural light and ventilation.

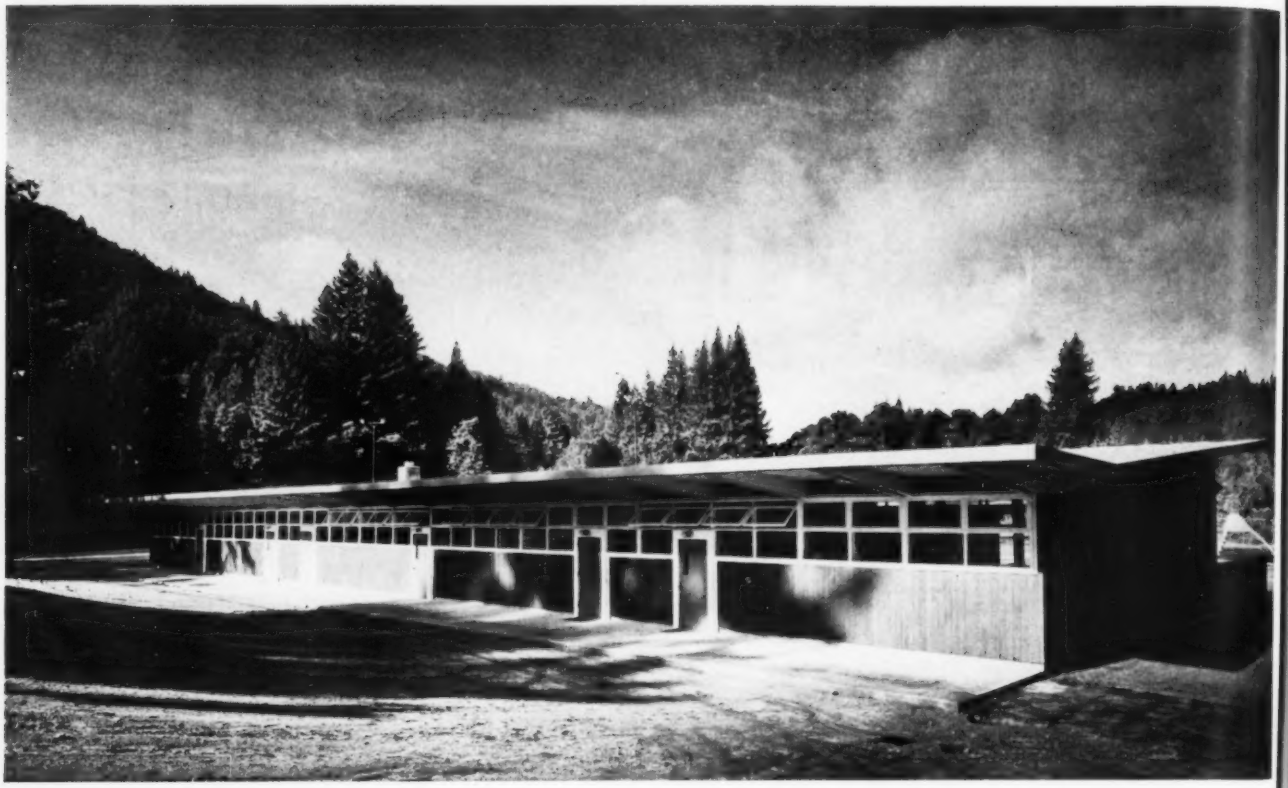


Walls of general manager's office (right and below) are light oak plywood; suspended acoustical plaster ceiling contains light cove, is painted a dark blue-green. Oak desk was designed by architect. Carpet is beige, chairs are upholstered in red. Office has built-in bar complete with refrigerator, sink, work counter, storage cabinets



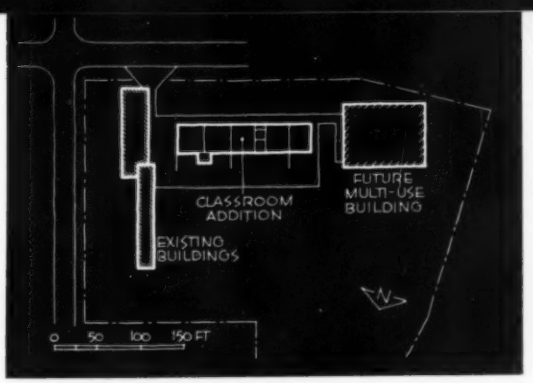
Joseph W. Molitor

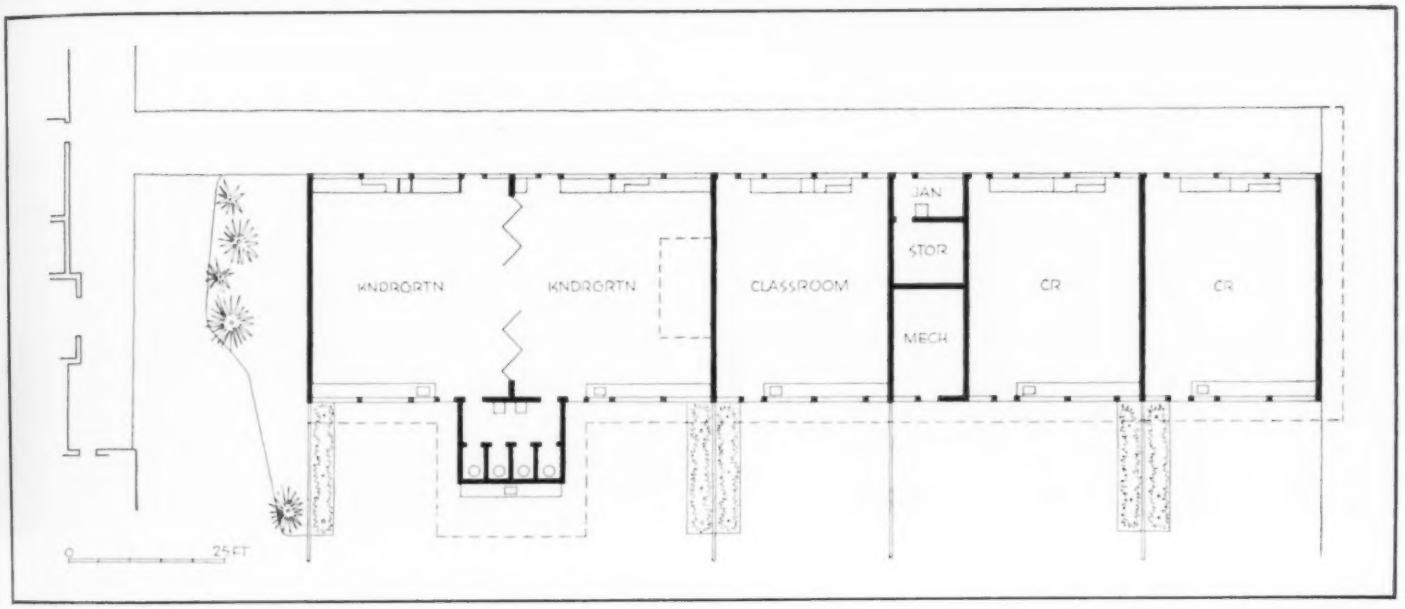
Assistant manager's office (below) and credit manager's office have green and white rubber tile floors, light yellow walls, rust-colored acoustical plaster ceilings. Desks and chairs, selected by architect, are walnut, as are cabinets below windows



Morley Baer

SMALL PRIMARY SCHOOL ADDITION





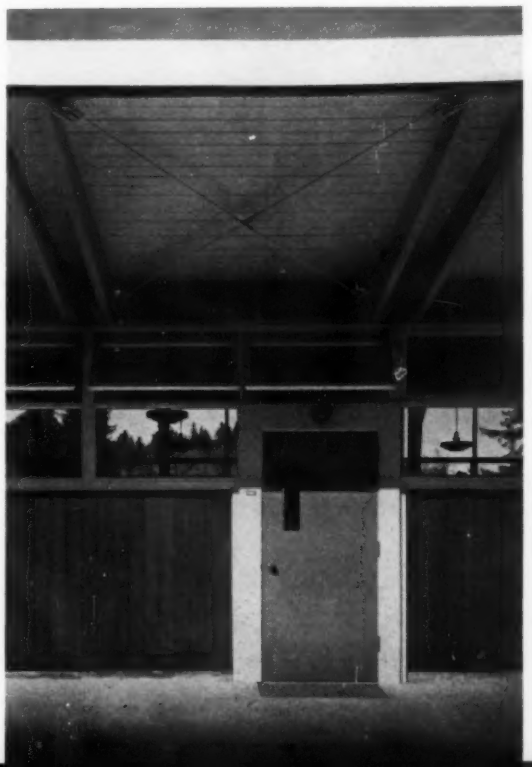
USES RIGID FRAMES OF WOOD

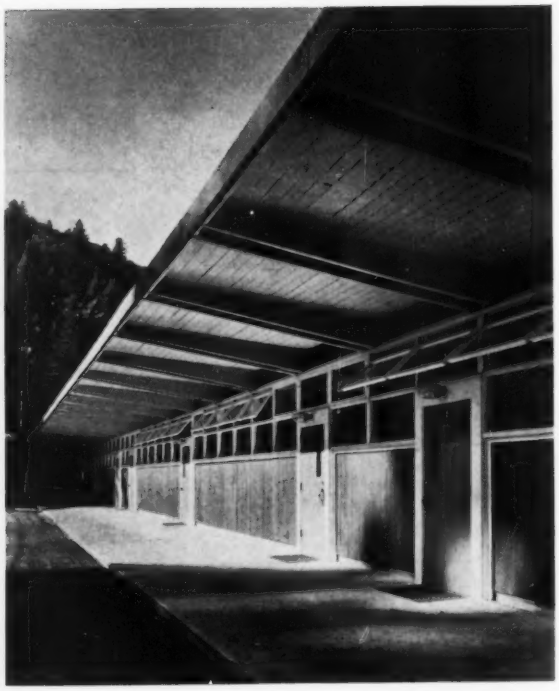
Elementary School Addition,
Boulder Creek, California

John Lyon Reid, Architect

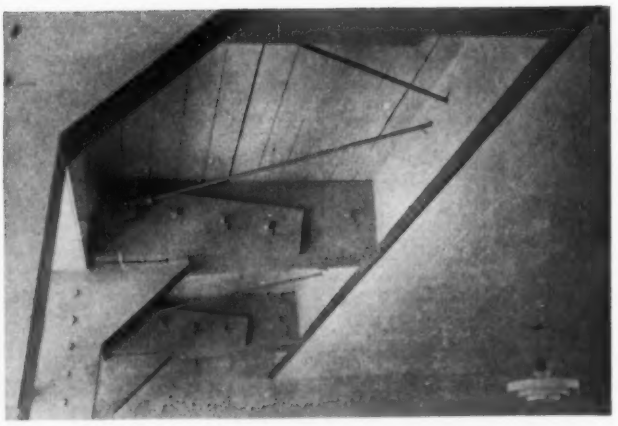
While this little school building might be analyzed for several different contributions, it seems chiefly notable for a structural system forced upon it by the late steel shortage. The architects set out to emphasize flexibility, for the early program called for this little addition to house only one kindergarten, one primary classroom, administration and multi-purpose room, the latter two spaces to be ready for conversion into classrooms. They wanted to avoid the use of bearing partitions that would be fixed, so steel construction seemed logical. But steel was in doubtful supply. The answer was a system of rigid frames constructed of wood with timber connectors (see details next page). These frames are spaced 8 ft on centers, and straight 2-in. T&G sheathing is applied directly to the frames without joists, forming the roof deck. Diagonal rods carrying the seismic load were installed later in the construction schedule. The frames were erected in a day and a half, after having been cut and assembled on the site. Work crews could then go to work all over the structure.

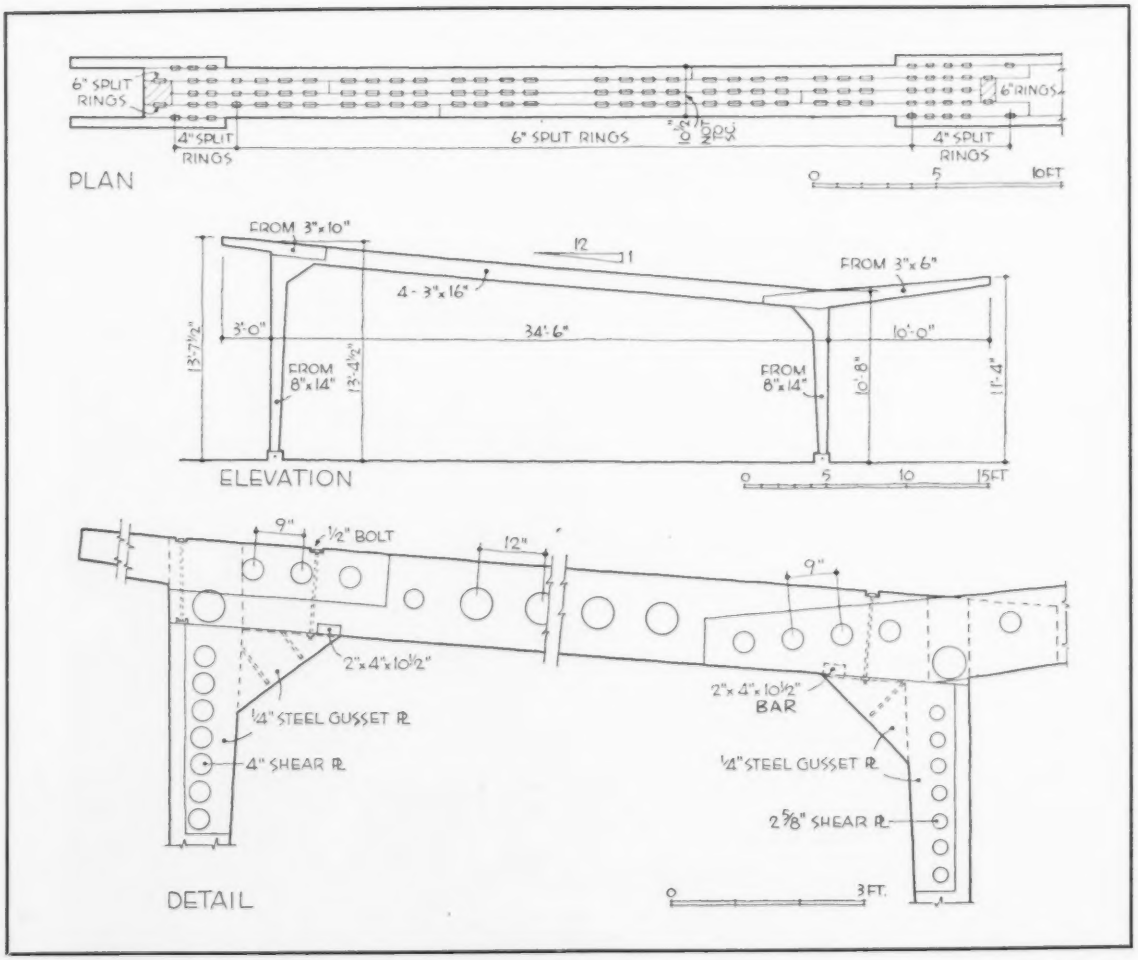
Actually the school enrollment increased so fast that the full classroom development was made almost before the first contract could be completed, so that right from the start the building developed as in the above plan.



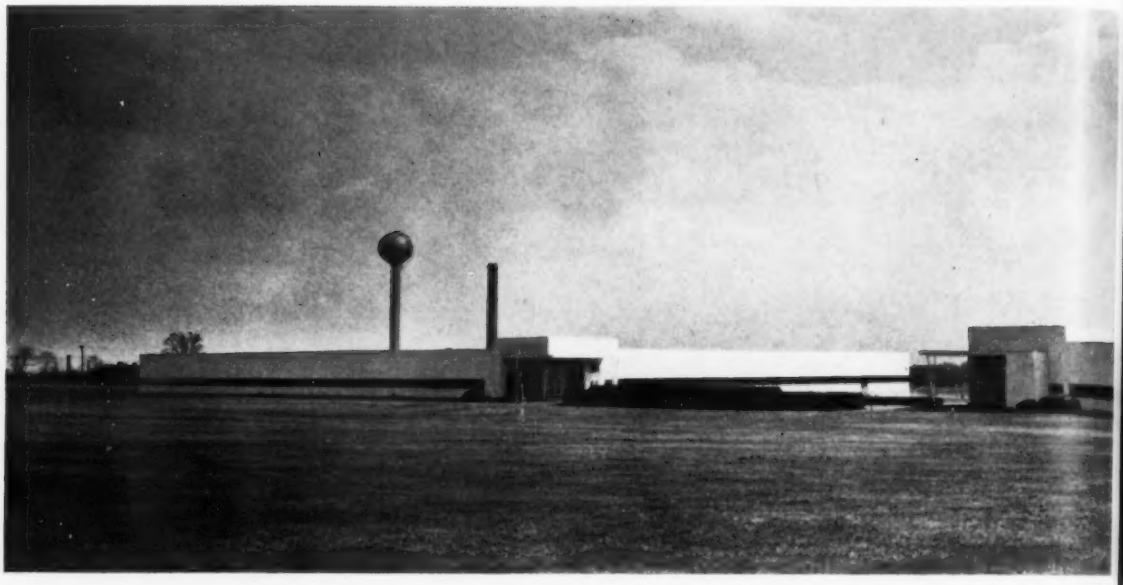


Morley Baer



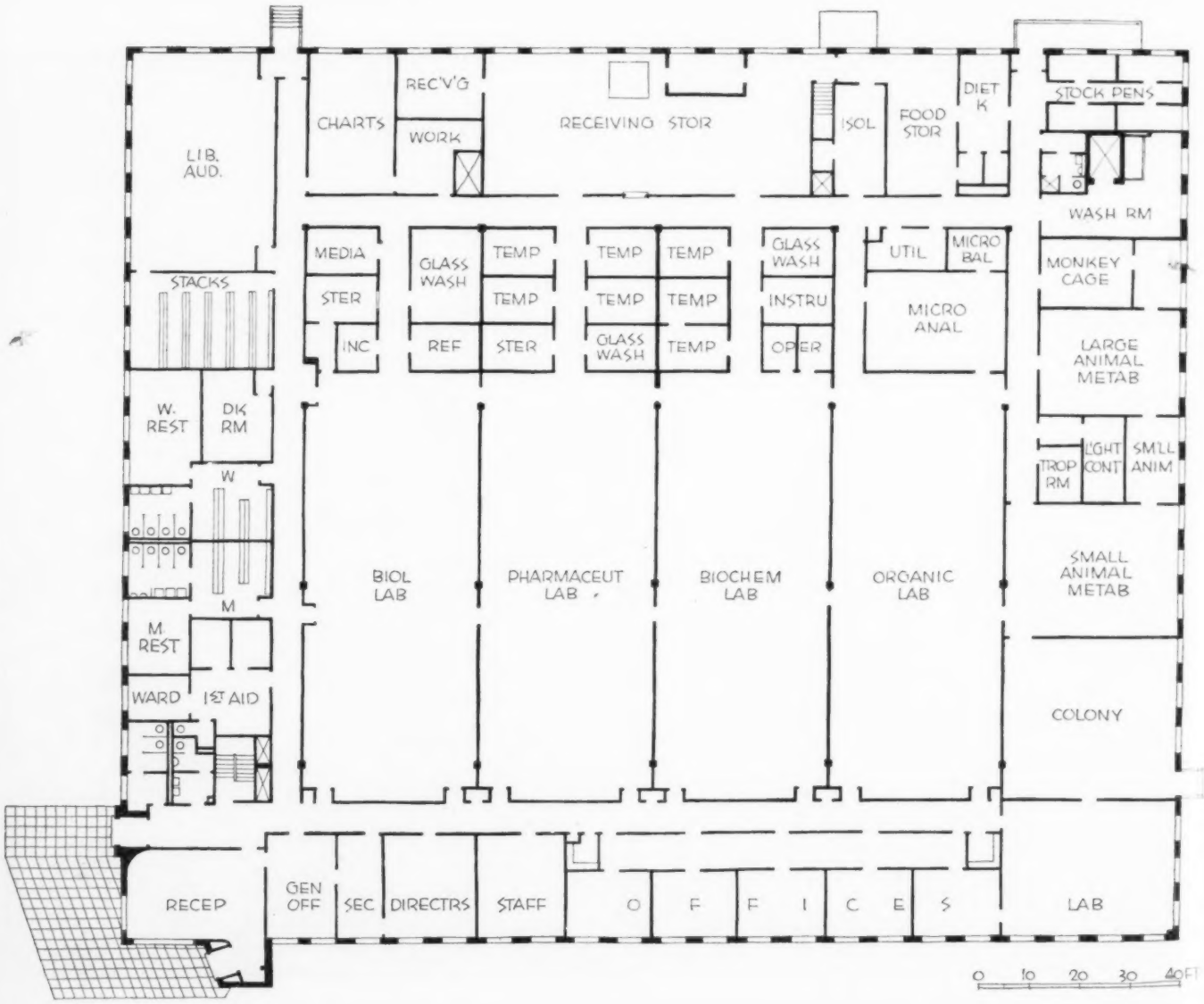

6" SPLIT RINGS
4" SPLIT RINGS
6" SPLIT RINGS
4" SPLIT RINGS
6" RINGS
PLAN
0 5 10FT
FROM 3"x10"
12
1
FROM 3"x6"
4 - 3"x16"
3'-0"
34'-6"
10'-0"
13'-7½"
13'-4½"
FROM 8"x14"
FROM 8"x14"
10'-8"
11'-4"
ELEVATION
0 5 10 15FT
9"
½" BOLT
12"
9"
2"x4"x10½"
2"x4"x10½" BAR
¼" STEEL GUSSET PL
4" SHEAR PL
¼" STEEL GUSSET PL
2⅝" SHEAR PL
DETAIL
0 3FT.

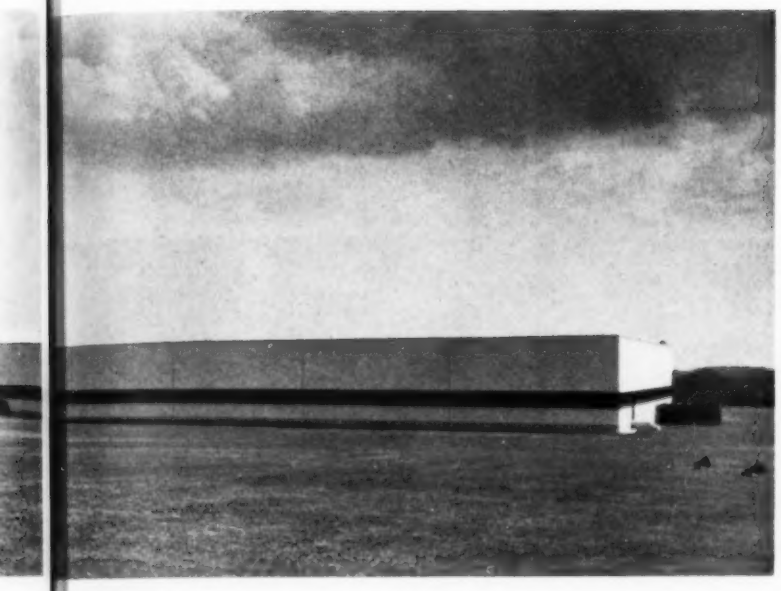
The architects rather felt that the exposed framing, with steel rods for seismic loads, should be left exposed near the window walls, as in the upper view on the opposite page. School officials felt that beyond the acoustic ceiling there was an unfinished look, and voted an additional $1200 to enclose the framing with plywood, as in lower view opposite



Ben Schnall

TWIN LABORATORY AND MANUFACTURING BUILDINGS FOR





FOR ORTHO PHARMACEUTICALS

Ortho Pharmaceutical Corporation, Raritan, N. J.

Shreve, Lamb & Harmon Associates, Architects

Eadie, Freund & Campbell, Mechanical Engineers

Peter A. Strobel, Structural Engineer

Concept of an industrial plant: remote location; lawns and landscaping; functional facilities for both research and manufacturing

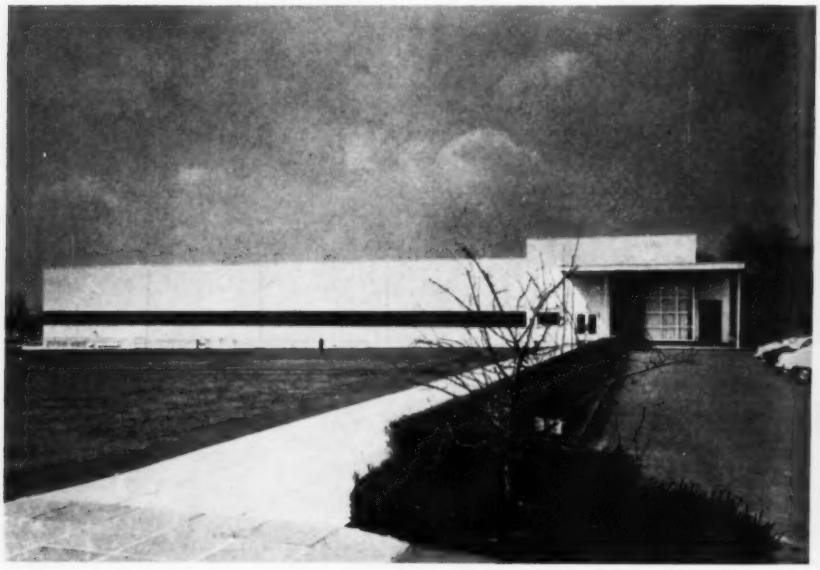
Molitor

WHILE the two buildings shown in the photograph might be quickly described as "clean," these twins actually tell an interesting story of modern industrial thinking. One point is the remoteness of the plant from the usual industrial congestion, made possible by the small bulk of the medical products and the development of good truck transportation. As far as the worker is concerned, remoteness is an asset; easy driving and plenty of parking are preferable to any forms of transportation associated with the city. There is also the morale factor of being able to work in pleasant country surroundings, with open lawns to brighten his outlook and dignify his work. These amenities are protected by the extent of the site, which itself is made feasible by the low land cost. The plant has a substantial frontage on a railroad, permitting future installation of a spur.

The two buildings are apparent twins, though one is a manufacturing plant and the other a laboratory, the scientific aspects of this business being comparable, space wise, to the processes of manufacturing. The buildings are connected by a tunnel for service lines, the paved top of which was intended to serve as the floor of a future connecting passage. Separate reception rooms and offices are provided in each building. The research building has a supported first floor throughout, part of the area below being used for mechanical equipment and storage, part for a crawl space 6 ft high for service lines. The manufacturing and administration building is constructed with its floor slabs on fill, except for a small basement for mechanical equipment.

Exterior walls of both buildings are of cinder concrete block with 1 in. of cement stucco on outside surfaces. At column centerlines, 35 ft on center, walls have control joints with sheet metal bellows covered on the exterior face with snap-on stainless steel strips. Window spacing and size were largely determined by the client; windows are not depended upon for illumination. All bulkheads, fans, and so forth on the roof were kept low as possible, to make them invisible from the road approach to the building, as an important consideration in this company's thinking is the very practical institutional values in architecturally "clean" appearance.

Walk between buildings is paved top of service tunnel, can be roofed over for enclosed passage if desired. Each building has reception room and row of offices along north side. Parking space is between buildings, and is screened from the road by shrubbery. Extensive lawns are considered a "must"



Long masonry walls gave some concern over movement, especially with high parapet walls. Back of parapets have an enlarged cant to equalize temperatures in attic space and behind parapets to minimize cracking at joints. Built-up roof is designed to carry a 2-in. covering of water for insulation.

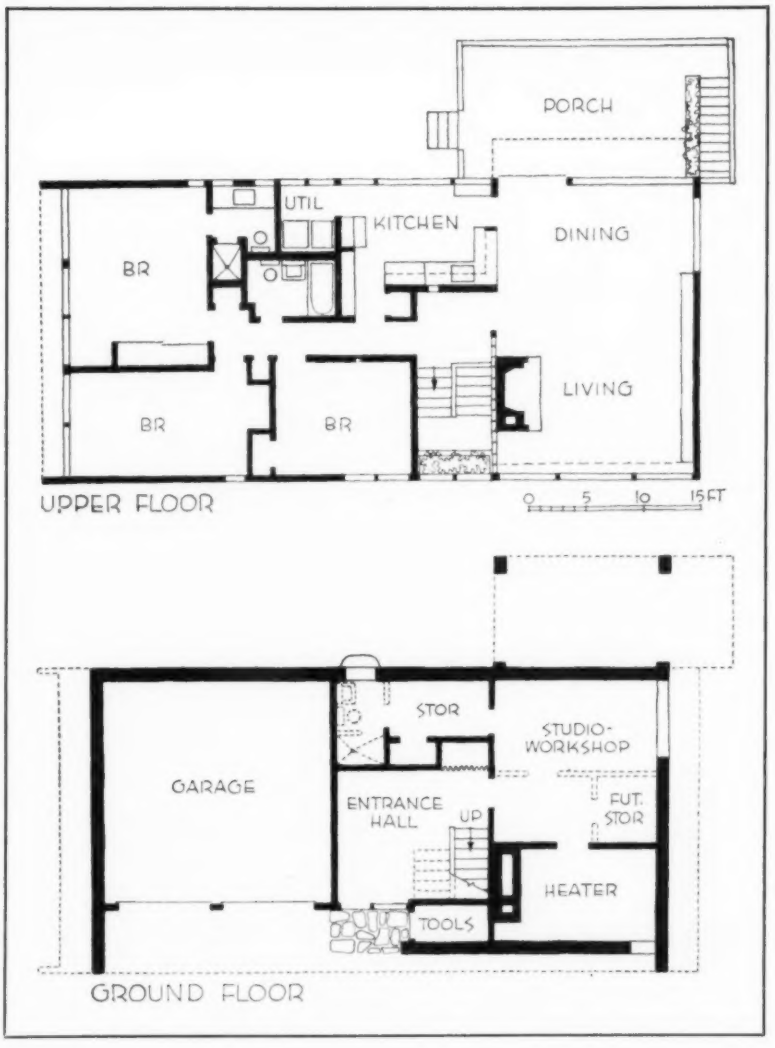
Molitor

Laboratories are all inside rooms, and are quite large. The owner prefers large open laboratories to small cubicles, to encourage close cooperation of research workers. Service piping runs in trunk lines in crawl space, with connections on a module of 11 ft 8 in. corresponding to table spacing

RAISED BASEMENT EXPANDS HILLSIDE HOUSE

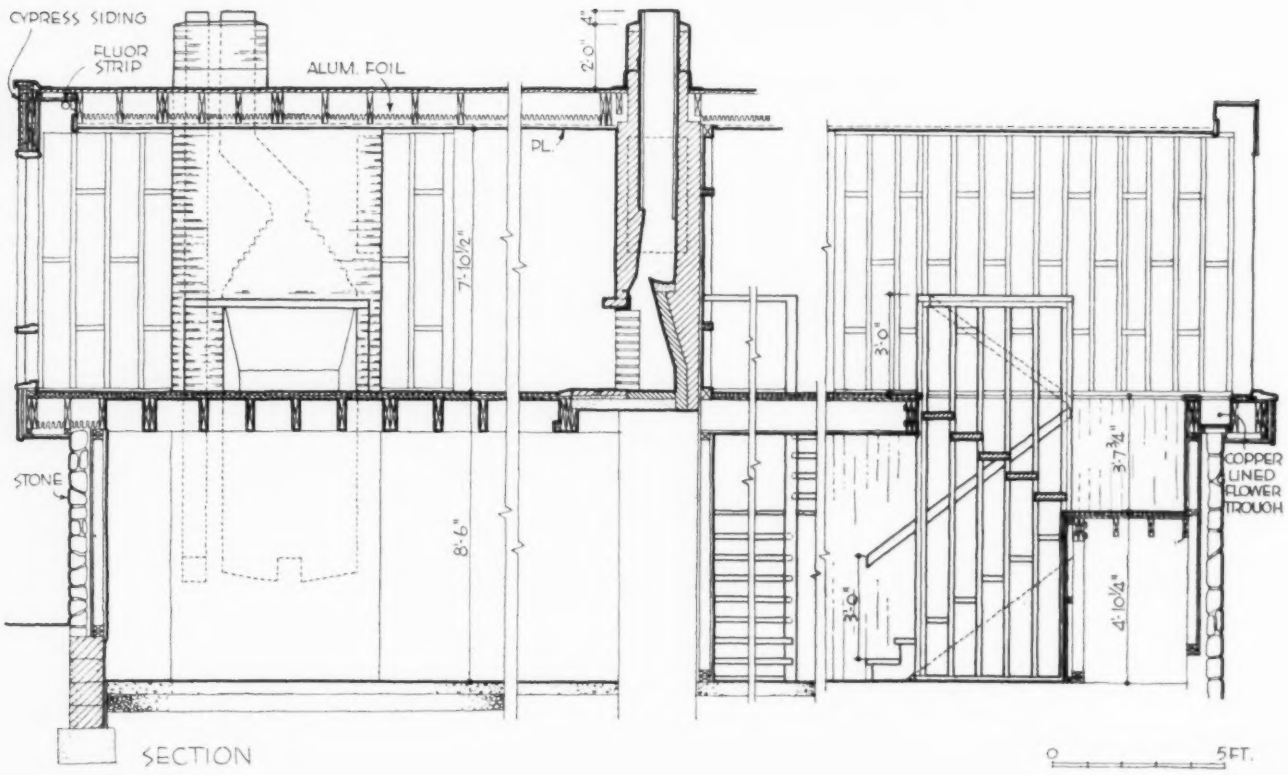
Residence of William Wallace Landsberg, Architect
Port Washington, Long Island, New York

FOR HIS OWN HOUSE on Long Island, William Landsberg has added several new twists to ways of gaining more real and illusionary space from a compact plan, and at relatively low cost. The hillside site was used to considerable advantage. The "basement" area was only partially set into the slope, reducing excavation costs, and providing extra usable space at ground level. This area contains a studio which can be converted into a spare bedroom and bath, storage space, a large reception hall, and an economical and convenient arrangement for the garage. The basement has, in effect, only three foundation walls, of concrete block; the fourth consists of openings and a stone veneer panel. The wood frame structure of the upper floor is cantilevered out from the ground floor, and gives protection to the openings. Fairly standard techniques were used to increase the apparent size of the living space: large, carefully placed glass areas, open planning and direct access to a terrace and ground level at the rear. Costs were reduced, however, by using exposed studs as a screen partition, ganging utilities, and dividing glass areas into smaller simply-framed units.



Very good circulation and convenience for a servantless household are provided for in the plan. The kitchen is placed for easy access to both indoor areas and the porch, overlooks play yard at back

Joseph W. Molitor

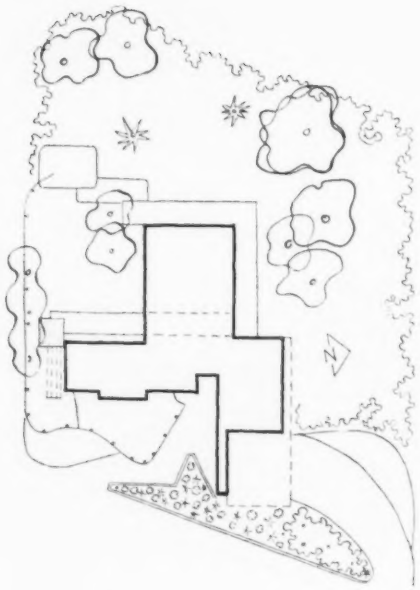


The entrance stair hall (right) gives an unexpected sense of space as the intermediate landing is reached. Sections above show details of stairs, fireplace and the exposed stud partition

Joseph W. Molitor

The quantity of large trees reduced the problem of orientation (south and east elevations shown above). The exterior has cypress siding, asbestos cement board below bedroom windows, copper coping. Most rooms have cross ventilation

Raised living room gives some privacy from entrance drive, excellent views. The house has radiant heat in ceilings of upper level, floors of lower level; basement floor is 4-in. concrete slab on 6 in. of gravel

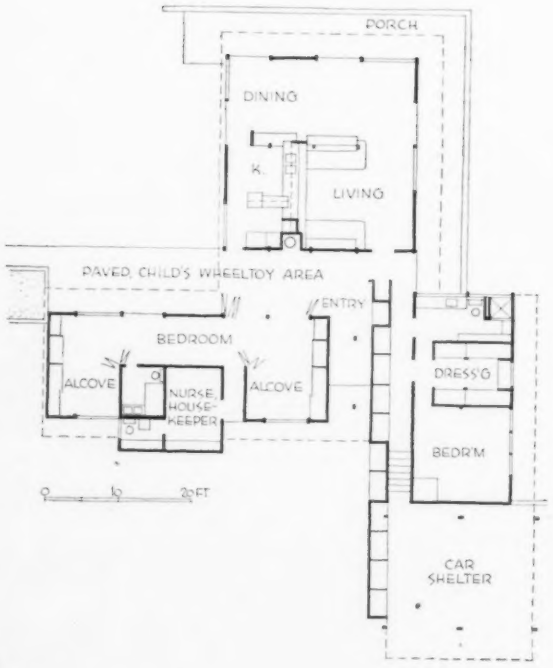


SAFETY FOR CHILDREN—PRIVACY FOR ADULTS

Residence for Mr. and Mrs. Samuel Sale

Pasadena, California

Whitney R. Smith, Architect



SAFETY for the young children and privacy for the parents highlight this small California house. Since neither the safety nor the privacy, nor even the combination of the two, is unusual, the chief interest here is in the skillful use of a rather small and restricted site. Had the house not been placed across the lot as it was, neither the children nor the adults would have had such complete privacy in their outdoor recreation areas; the proximity of the house to the road, however, required special treatment of the main entrance areas.

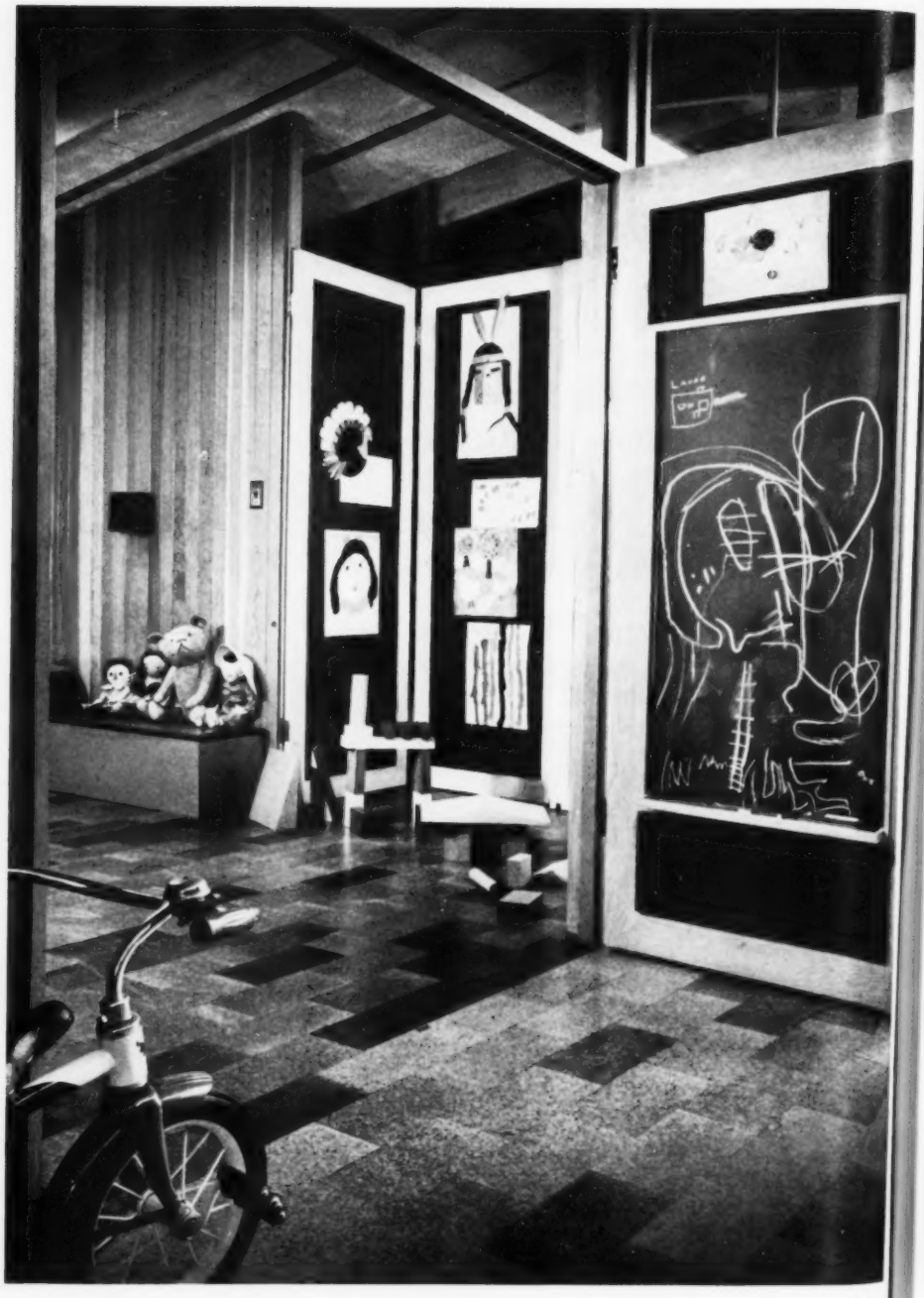
As the plans at left show, the house was divided into three separate wings: one for the children, one for the dining-living area, and one for the master bedroom suite. The children's wing is accessible only from the main entrance hall and the sheltered play terrace. The rest of the house can be reached either by a path from the street to the front door or by the more private route between carport and master bedroom wing.

House was placed across site to close off children's wing from driveway and street, and to give adult wing direct access to carport. Photos opposite: top, bedroom wing and carport, center, house from street. Left: porch around living-dining area is at ground level only at rear of house. Below: adult wings are connected with rear terrace by hall leading past cork-covered accordion doors of children's quarters

Julius Shulman

SAFETY FOR CHILDREN
PRIVACY FOR ADULTS

Sleeping alcoves in children's wing are diplomatically alike in size and arrangement. Each has one whole wall of closets and cabinets—enough storage space to see any child through collecting stage. Skylights have adjustable light control



Julius Shulman

Doors separating sleeping alcoves from central play area and rest of house are accordion-type, covered with cork, and equipped with ball-bearing rollers to facilitate operation and prevent damage to concrete floors; check blocks on connecting jambs keep doors from opening on straight line, eliminating need for auxiliary support. Outdoor play terrace (left) is direct extension of playroom; hop scotch and shuffle board "courts" were built into terrace slab

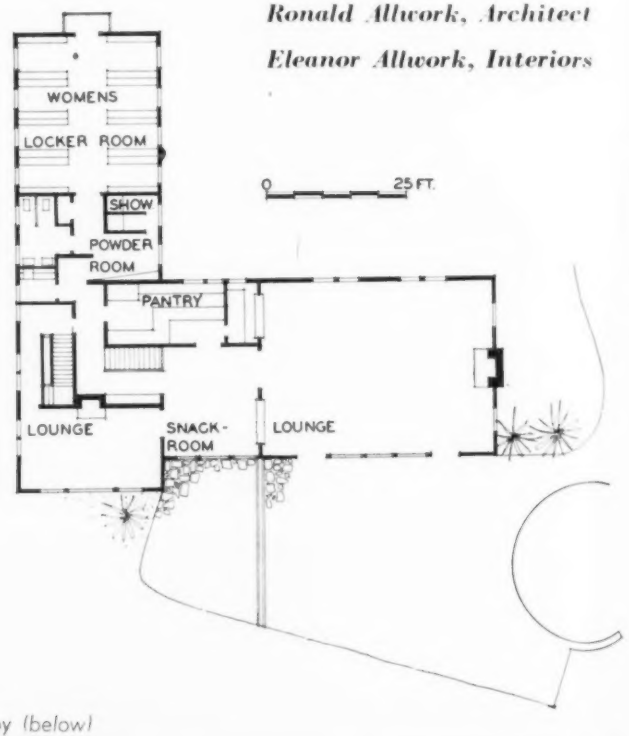
Entire living-dining section of house is rimmed by elevated porch protected by roof overhang. Dining area (below) is connected with kitchen by pass-through which may be opened or closed as desired. Record player and record storage unit (bottom of page) was made focal point of living room instead of more usual fireplace; built-in couches slide out, can be made up as beds. Upholstery is plastic. Light fixtures throughout house are plastic arcs held by ceiling battens

GOLF HOUSE FOR LAKE PLACID CLUB

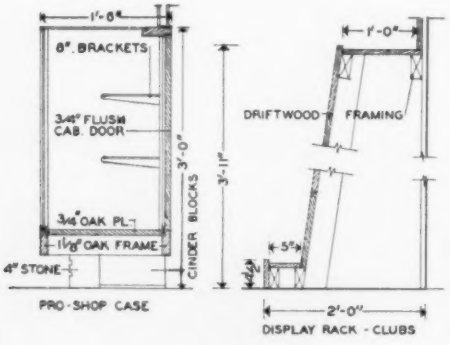
A TWO-LEVEL SITE, Adirondack view and dual use (as golf house and party lounge) directed the plan of this first addition to the famous club's plant in 30 years. Golfers have direct access from motor entrance to teeing off area via lower level lobby. Upper level lounges open on the large flagstone terrace which is connected by footpath to the main clubhouse. Effective separation of men's and women's locker areas is achieved; the lower lobby displays of golf supplies are well handled. Local pine boards, creosoted, and local scrap slate contribute to the rustic character. (More illustrations on page 282.)

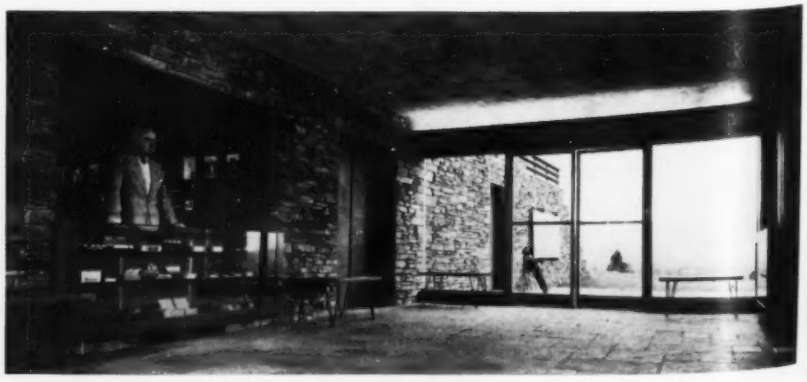
Ronald Allwork, Architect

Eleanor Allwork, Interiors



Golf supply displays are built in; glass end-walls light lower level lobby (below)





THE ROLE OF CONCRETE ADMIXTURES:

A Panel Discussion

Concrete admixtures are by no means new, but like lightweight aggregates they are winning new attention due to the tremendous increase in the use of concrete structures. The value of admixtures was given much discussion and brought into clearer focus recently at a meeting of the Concrete Industry Board of New York City, a new organization initiated by Roger H. Corbetta, well-known president of the Corbetta Construction Co.

The meeting was in the form of a panel discussion, printed here in its entirety, which included among its participants: Edwin M. Forbes, of Brown, Lawford & Forbes, Architects; Francis L. Brown, of Brown and Blauvelt, Consulting Engineers; Ernst Gruenwald, chief engineer of the Incor Division, Lone Star Cement Corp.; Robert L. Mauchel of Master Builders Co.; and Emil Schmid, of the Sika Chemical Corp. Roger Corbetta was chairman and leads off the discussion.

Corbetta: The subject of admixtures is of great interest because of the mystery in it. *The purpose of an admixture is to alter the normal properties of concrete,* and a lot of intriguing, tempting claims are made by admixture manufacturers. The cement manufacturers, on the other hand, say, "If admixtures were any good, we'd put them in ourselves."

As it is now, most architects and engineers — not to mention the rest of us — are simply in a quandary, and it is to our benefit to get ourselves out of it as soon as we can. This discussion will be of great value if it tends at all to minimize the confusion which exists in the minds of a great many people in the concrete industry, relative to the merits of the various admixtures available.

Brown: It must be assumed that the reader is acquainted with the basic factors of good concrete strengths ranging from 2500 psi to as high as 8000 psi. The effects of various aggregates and combinations of aggregates are also assumed to be well known, as well as the use of different types of cement.

Architect and Engineer on the panel were, from left to right, Edwin M. Forbes of Brown, Lawford & Forbes, Architects; Francis L. Brown of Brown and Blauvelt, Consulting Engineers. At right is Jacob Feld, Consulting Engineer

First, let me ask Mr. Schmid for *a few words on the nature of cement and how it can be affected by admixtures.*

Schmid: The final product of cement manufacture contains four principal components, namely, tricalcium silicate, dicalcium silicate, tricalcium aluminate, and tetracalcium alumina ferrite. These have different rates of reaction. The tricalcium silicate and tricalcium aluminate react very quickly and contribute to the early strength development, while the dicalcium silicate is sluggish and does not complete its reaction until several months have passed.

The setting time of the cements is controlled by the regulated addition of gypsum during grinding of the cement clinker. Specifications set time limits for initial and final set. These are related to the time required for placing concrete under normal job conditions.

By the use of certain admixtures the normal setting rate can be either retarded or hastened as job conditions may require.

Another property of cement that can be affected by admixtures is physical in nature. When water is added to cement, the surface of the cement will absorb water and form a gel. It is this gel layer which imparts the characteristic fattiness to concrete or mortar. Should an admixture be added to modify gel formation, radically different properties of the mix are possible. *In concrete more water usually is added than required for hydration. By admixtures this excess water can be reduced while maintaining workability of the concrete mix.*

Brown: As reported by the American Concrete Institute Committee 212, admixtures are defined as: accelerators, air-entraining agents, gas-forming agents, natural cementing materials, pozzolanic materials, retarders, water-repelling agents, water-reducing agents, and workability agents.

The desired effects of admixtures upon concrete mixes can be enumerated as (1) improvement of workability, (2) acceleration of the rate of strength development at early stages, (3) retardation of initial stiffening or increasing the time of set, (4) retardation or reduction of heat evolution, (5) increase in bond to steel reinforcement, (6) modification of the type or speed of bleeding, (7) increase in durability or in resistance to special conditions of exposure to deteriorating elements, (8) decrease in capillary flow of water, (9) decrease in permeability to liquids, (10) improvement of penetration and pumpability as in gunites or grout mixtures and reduction in segregation, and (11) prevention of settlement or creation of slight expansion.

THE ROLE OF CONCRETE ADMIXTURES

Mr. Forbes, the architect member of our committee, has shown the committee some of the problems facing him and his interest in them, so perhaps he can discuss these applications from his standpoint.

Forbes: I believe that my study of admixtures on this committee has convinced me of one thing. *Basically the concrete technology must be sound. Admixtures are not a cure-all.*

Brown: Has the fact that an admixture may have more than one effect complicated your thinking on the problem?

Forbes: Yes it has. Fundamentally, however, it has emphasized that *the need of the admixture must be known; otherwise, specification of result is not possible in this field. The architect must know what he wishes to accomplish and then specify an admixture suitable to accomplish the results.*

Brown: Mr. Schmid, I believe you told me one case concerning retarding agents in which lack of knowledge in the field caused a little problem.

Schmid: Yes, in this case the contractor had requested permission to use a retarder to help him pump concrete in place. One pour worked so well that he increased the quantity the next day by four times.

Brown: What happened?

Schmid: The concrete had not set when the men reported for work the next day and almost 24 hours elapsed until the set began. Incidentally, this was just a retardation and the ultimate quality of the concrete was very high.

Brown: What type of a retarder was used?

Schmid: This was a retarder that reduced the gel formation and made excess water available for easier placing. This, of course, made the mix flow well in the pump.

Forbes: If the specifications had been established for the quantity first recommended, no trouble would have been experienced. This is a warning that admixtures and proportioning should be used in accordance with the manufacturer's recommendation.

Brown: Mr. Gruenwald, *is calcium chloride an anti-freeze admixture?* In cold weather do we add $CaCl_2$ to prevent freezing?

Gruenwald: No. In fact, the concentrations of calcium chloride in water used in cold weather concreting does not lower the freezing point of the solution more than 1 or 2 degrees. *Calcium chloride simply acts as an accelerator. It shortens this time of initial and final set; therefore, the danger of freezing may be reduced.*

As a matter of fact, if enough calcium chloride were used to lower the freezing point appreciably, a flash set would occur and the concrete could not be moved into place.

Brown: The various trade name products containing calcium chloride must be accepted then for their true value. Freezing is not overcome but acceleration of set may reduce the chances of freezing. It is important that sufficient outside heat be available.

Gruenwald: That is right.

Forbes: I think all architects would do well to keep this important fact in mind. Cold weather concreting is a serious problem.

Mauchel: In concrete used in highway construction, air entrainment has been demonstrated, beyond any question, that *air-entrained concrete is much more resistent to deterioration from alternate freezing and thawing action, and the use of de-icing materials in northern latitudes, and other salts, sea water, etc.*

Purposeful air entrainment of concrete introduces other desirable properties. Air bubbles of themselves are workability agents, and are a part of the mortar; because of this the harshest component of the mortar, i.e. sand, can usually be reduced, yet workability of the concrete is increased. In turn, air entrainment reduces bleeding and segregation which is particularly desirable or necessary when concrete is plant-mixed and transported in open dump trucks. Also it is contended, but not proven to the fullest extent, that air entrainment adds to the water-tightness of concrete.

Therefore, it would seem that greater application of air entrainment to architectural concrete can be made.

Forbes: That is probably true, but *don't concretes with entrained air have lower ultimate strengths, and perhaps other detrimental properties?*

Mauchel: *Yes, there is some sacrifice of strength* — generally conceded to be approximately 5 per cent reduction for each 1 per cent of air entrained. However, this reduction in strength does not usually commence until after 3 or 4 per cent air has been entrained, but this loss of strength can obviously be overcome by the use of more cement, or by an admixture which further reduces the water-cement ratio and unit water content, below that produced by the air-entraining agent.

The only other detrimental property, to the best of my knowledge, is in the case of excessive air content which

TYPES OF ADMIXTURES DISCUSSED BY THE PANEL

Accelerators

Air-entraining agents

Gas-forming agents

Natural cementing materials

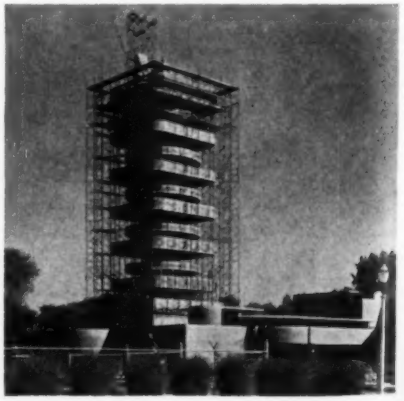
Pozzolanic materials

Retarders

Water-repelling agents

Workability agents

Water-reducing agents



Above: an air-entraining and water-reducing agent was incorporated in the concrete for the Johnson's Wax building. Across page: in the Parkmerced apartments (top) the high-strength architectural concrete had a workability agent in it. A workability agent was also used in the Gateway Center apartments, Pittsburgh, (bottom) as well as a retarder

PURPOSE
Primarily to decrease time of initial set of portland cement, lessening the possibility of freezing during cold weather operations
To improve resistance of concrete to weathering, and to freezing and thawing. Reduces scaling resulting from use of calcium chloride for ice removal
To produce lightweight mortar or concrete, using natural aggregates with portland cement
To react chemically with portland cement, decreasing deleterious effect of free lime; also to improve plasticity of portland cement mortar or concrete
To increase workability and decrease possibility of disintegration due to high alkali action
To retard the initial and final set of portland cement, primarily to attain sufficient time for finishing operations during hot weather
To decrease the permeability of portland cement mortar or concrete
To increase the plasticity of portland cement mortar or concrete, and to decrease the water-cement ratio for a given consistency
Same as for workability agents

retards the setting of the concrete.

Forbes: Mr. Brown, can you cover briefly the position of pozzolanic materials in the admixture field?

Brown: Committee 212 of the ACI tells in general that pozzolanic materials may be substituted for 10 to 35 per cent of the cement in large structures, especially dams. The materials improve workability, reduce bleeding and segregation, and reduce heat and hydration. Strengths are lower for the early stages but eventually strengths may be equal or greater.

Forbes: Can fly ash be included in the general terminology "pozzolanic materials?"

Brown: Yes, *I would like to add a few words about fly ash.* We are presently engaged by a large power company on a test program for the use of fly ash in a group of seven hydroelectric projects. The ideas on specifications for fly ash are being formulated. It is possible to use as high as 40 per cent of fly ash as an admixture, substituting it for cement. The serious drawback is that strength develops slowly. For a 20 per cent substitution the strength curve does not intercept the curve for a normal cement mix until about the fiftieth or sixtieth day. However, the heat of hydration is lower, and ultimate strength may be higher.

Forbes: You are covering the problem of fly ash in mass concrete. *What about the use of fly ash in structural concrete?*

Brown: *Because of the low initial strength of fly ash admixture concrete a person would have to be very careful before selecting it for structural concrete.*

Forbes: If fly ash were substituted for 20 per cent of the cement, what would be the problem of cold weather concreting for structural concrete?

Brown: In that case, too much calcium chloride as an accelerator might have to be used. Inasmuch as calcium chloride is an accelerator and fly ash is a retarder, the two cancel each other. For fly ash admixture, artificial heat must be supplied for a longer period until the danger of freezing has been eliminated.

Forbes: Will air-entrainment agents work with fly ash admixture concrete?

Brown: Yes. But again there may be an opposition of properties. General results indicate a considerable increase of air-entraining agents to maintain normal 3–5 per cent air contents. I would like to mention another property of pozzolanic materials, including fly ash. When the pozzolanic material is substituted for a part of the fine aggregate and the cement content is kept normal, erosion by salt water or by other chemical attack results.

Forbes: This is particularly true when the concrete does not have a good gradation of fine aggregate isn't it?

Brown: Yes, that is true. If the fine aggregate is too high in fines, the addition of more pozzolanic materials may require higher water-cement ratios and cause high absorption and drying shrinkage. Mr. Forbes, from the discussion what do you make of the use of fly ash as an admixture?

Forbes: For mass concrete it has many desirable characteristics. For sea wall and open exposed areas, the substitution of suitable fly ash for part of the fine aggregate offers much. When we consider it for normal structures, then slow setting and slow development of strength would offset many of the economical gains from its other features. I think we must also emphasize the fact that accelerators like calcium chloride cannot be used to advantage in cold weather.

Brown: This is another case of multiple effects which must be balanced.

Now, Mr. Gruenwald, I could give you a tough one and ask you about natural cement, but I won't. However, [it should be mentioned] that New York State for many years has used natural cement in its structures and pavement. Air entrainment advantages were gained in the use of natural cements, but the "why" of this represents a long story of our competitive democracy in action. Need we say only that increased durability with special reference to resistance of pavements to freezing and thawing resulted.

Gruenwald: The Portland cement industry, among others, has studied the effects of air entrainment since 1935. *The cement manufacturers use various additions to produce air-entraining cements and, of course, air-entraining admixtures can also be added at the mixer.* The amount of additions is very small. Incidentally, one of the oldest air-entraining materials is alumina powder and you may be familiar with its use in lightweight concrete where, however, the amount of air entrained was greatly in excess of what we are using today.

Forbes: *I recently had a problem of a fish pond. How could I introduce admixtures to affect the concrete for this purpose?*

Mauchel: There are many so-called waterproofing admixtures. However, the Fair Trade Practices Commission has ruled that no one may legally use the word "waterproofing" in connection

with admixtures for concrete, certainly not in literature or advertising. It might be well to differentiate between types of so-called waterproofing and water-repellent admixtures.

There are those in the general classification which use calcium chloride as a base — the properties of which are well known.

There are those which have as a base soaps or fatty acids. These products reduce capillary attraction, but do not resist water under a high head.

There are other admixtures which make concrete more water-tight by physical measures such as by reduction of the water-cement ratio and unit-water content. Cement-dispersing agents are among such. The Bureau of Reclamation, in its concrete manual under the heading of "water-tightness," states that the required properties, in part, are "lower water-cement ratio with lower water content."

▶ *No economically feasible admixture can completely and entirely eliminate the normal absorptive qualities of concrete. They can aid only in making concrete more water-tight.* Obviously, therefore, there is no substitute for a properly designed concrete, using properly graded aggregates.

▶ *Broadly speaking, there are four main causes for leakage through concrete:*

1. Excessive water use in the manufacture of concrete, which creates capillary tubes or pores caused by the excess water leaving the concrete while it is setting and through which, subsequently, water and other liquid can pass.

2. Honeycombing — sometimes due to an engineer's attempting to have concrete of insufficient workability placed too dry; also concrete placed with improper compaction. (By this is not meant overvibration.)

3. Sand streaks due to poor concrete design; or porous sections due to segregation.

4. Weak planes between lifts and layers of concrete caused by excessive bleeding; thus laitance formation, and, of course, cracks in the concrete caused by excessive shrinkage and settlement.

Brown: Water-tight concrete can therefore be made by using good concrete first and by insuring that the properties do not change due to segregation. Isn't that true?

Mauchel: Yes.

Brown: Let us talk about retarders
▶ for a moment. *Under what circumstances would a retarder be desirable?*

Schmid: *One case is hot-weather concreting.* We have mentioned accelerators on cold-weather concreting. The corollary is true. Retarders in hot weather are very desirable to reduce the setting time to a point that the concrete may be moved from mixer to final location. By insuring a proper interval for placing, pumping is possible; or placing by other means need not be accelerated. *Retarders are very desirable when mixers break down or additional time for floor finishing is needed.* ◀

Forbes: I remember one application that comes to mind now. By adding a retarding agent to the top surface of concrete, the body of the mix may set normally. Then the cement paste may be washed from the surface leaving an exposed aggregate for its architectural effect.

Gruenwald: That is very special application, and it has been used for architectural effects.

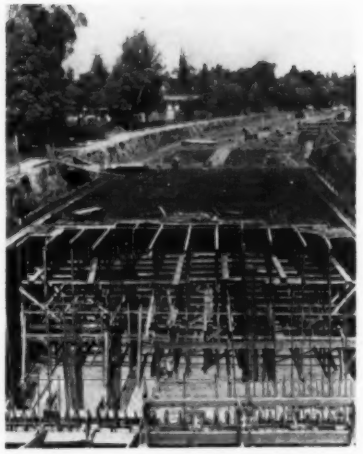
Mauchel: May I summarize that part of the discussion which was assigned to me by Mr. Brown? At the risk of reiteration, may I say that you gentlemen who have to do with specifying concrete mixes, or their use, should first of all make up your minds what the needed property or properties of concrete are for each particular project. Having determined this, you should then seek out the admixture which by research, test and performance has demonstrated that it introduces the properties which you require.

The subject of admixtures, as you well know, is highly controversial. There are many admixtures which have been offered for use and sale which have dubious, if any, real value. I am referring more to the past than present.

However, make no mistake — admixtures are here to stay. They are being used to a tremendously greater degree and extent today than they were in past years, and in the future their use will be even greater, regardless of differences of opinion which might presently exist.

As an illustration, no concrete is placed under the jurisdiction of the Bureau of Réclamation except air-entrained concrete — whether it is produced by means of air-entraining cement or by an air-entraining admixture. This is also true of the New York and surrounding state highway departments. Ten or fifteen years ago, this would have seemed ridiculous. Today, it is accepted practice.

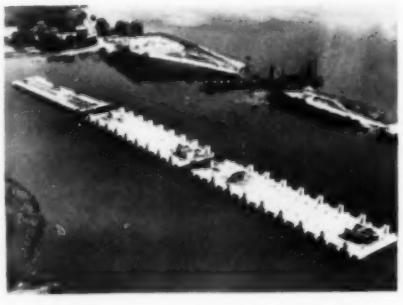
Similarly, the use of certain other admixtures has increased immensely in the last several years and continues to do so.



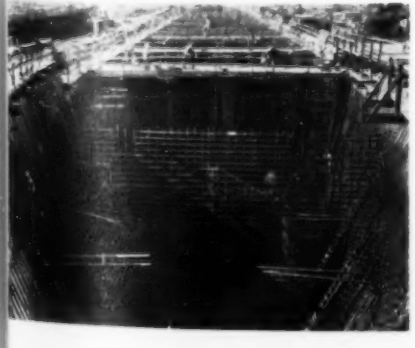
Above: the problem in a California reservoir was to gain watertight concrete under difficult placing conditions. A retarder and a workability agent were the admixtures. Below: concrete for this 4,750,000 gal. water tank had a cement-dispersing, water-reducing agent in it

Below: for uniform concrete and floors with high surface hardness and crack resistance, a retarder and water-reducing agent was used in constructing this bus terminal and parking garage at Bridgeport, Conn.

Below: an integral floor hardener was the admixture in the concrete floor of the American Optical Co. building in Vermont



Above: the admixtures in the concrete for New York City's Pier 57 provided for water-reduction, workability, retarding



Above: a water-reducing and workability agent was used to aid in the embedment of steel, give high strength and water tightness for this concrete ship of the U. S. Maritime Commission

It is no exaggeration to say, that out of between 150,000,000 and 200,000,000 yards of concrete placed in the U. S. annually, 25 per cent contains an admixture. Consequently, the subject of admixtures merits close attention and study.

The public and private university and government laboratories have a wealth of information on sundry products, and the counsel and advice of these agencies can well be sought by anyone lacking specific knowledge.

Obviously the reputable admixture manufacturers must and do have today competent technicians capable of discussing concrete in all of its phases, in whom the engineer and architect and contractor can place their confidence.

In other words, the admixture industry has come of age!

Brown: Concrete is one of the most useful of building materials. It can and does perform many varied functions.

Unlike other commonly used building materials, concrete does not come to the job as a completely manufactured item ready for installation. It must be properly designed and properly applied in order to successfully perform its design function. In my opinion the greatest difficulty arises in the fact that the users of concrete are not aware of its complexity and believe that it can be used indiscriminately and still do its proper work.

▶ *The greatest part of our troubles would be eliminated if every user of concrete were perfectly clear as to what the desired results were and then made sure that the concrete was proper for these results. This is particularly true when the admixture is considered.* I think that we have demonstrated here today that admixtures can be both beneficial and detrimental. I think that it is further evident that the ill-advised use of admixtures can be really serious. I would summarize the position as follows:

1. Know your requirements.
2. Know or find out the proper mix and the proper ingredients to achieve these ends.

Brown: Now Mr. Gruenwald.

Gruenwald: The best admixture for concrete is Portland cement. In my lifelong experience with concrete, I find that it has given and continues to give excellent performance without admixtures. There may be isolated instances where some particular condition of concreting operations calls for the use of admixtures to produce special acceleration or retardation.

Experience over the last 15 years has conclusively proved the advantages of air-entrained concrete. They improve workability of concrete and also increase its resistance to weathering actions.

However, before using any admixture the user should satisfy himself by tests as to what effect any admixture will have with the particular concrete being used. Otherwise the expected results may not be obtained.

Brown: Now, may we hear from Mr. Schmid.

Schmid: Admixtures have to be used intelligently to secure the desired results most economically. We must use them alone or in combinations to suit the job at hand. In winter we may need an accelerator. The quantity will have to be varied with the temperature and job conditions.

In exposed slab work we should specify an air-entraining agent, and its quantity will have to be varied depending on the aggregate, the temperature and other job conditions to give the optimum percentage of air needed for frost resistance. For structural work we may need a retarder and again the quantity should be varied with temperature and job conditions.

During cold weather some work may require the use of air-eatrainers and accelerators. For other purposes a retarder plus air-entraining may have to be employed.

If in any of the above work we need properties as secured with a pozzolanic material, such product should be employed in addition to other admixtures.

It can be seen that there cannot be one material in one package that can do all these things under all conditions. There can be no cure-all. Admixtures should be used in varying quantities alone or in combination to give the specific qualities we desire for the type of structure. Specifying admixtures to achieve this is not an impossible task. When specifying end results and classes of admixtures to be employed under each specific condition, proportions can be varied by the engineer during the progress of the job, depending upon the temperature and job conditions.

Brown: Gentlemen, you have heard the various ideas of the Committee. We have not given you any recipes — we don't think that we can. That would take just too long, but we have told you the fundamentals of them, their multiple effects, and that admixtures can be good and can be bad, depending on how you use them.

CRACKING OF CONCRETE BLOCK WALLS:

Research Study by HHFA

The first of a series of investigations indicates shrinkage of concrete block to be a factor. Additional study is contemplated on (1) performance of block in walls, (2) effect of mortars, (3) effect of door and window openings, (4) value of reinforcing, (5) control joints, and (6) possible use of admixtures to reduce shrinkage

CONCRETE BLOCKS have many advantages, but these have been offset partially by the tendency of walls comprised of blocks to develop cracks which are unsightly and often permit leakage through the wall.

Observations of concrete masonry structures damaged by cracking indicate that there are causes other than unequal settlement of foundations or stresses set up by the movement of floor or roof slabs bearing on the walls. It is believed that an important contributing factor is the volume change in the blocks due to drying shrinkage.

The Housing and Home Finance Agency has recently reported * the results of a research study on this subject conducted at the University of Toledo (Ohio). In addition to determining the relation of shrinkage to the moisture content of concrete blocks, it was found that specimens could be made with relatively inexpensive laboratory equipment which could duplicate commercial concrete blocks, making it possible for university and other laboratories to test materials native to their particular area.

The study involved some 200 or more combinations of the following variables:

(a) Six types of aggregates (sand and gravel, pumice, cinders, expanded shale, expanded slag and sintered shale).
(b) Four methods of curing (a fifth was included for expanded shale).
(c) Two strengths of mix.
(d) Two cycles of wetting and drying.
(e) Two methods of production (commercial and laboratory).

In order to eliminate variables of temperature and humidity, the cured masonry units were placed in water until saturated. Then they were allowed to dry under controlled temperature and humidity conditions.

Some Interim Conclusions

The results of the investigation lends support to the following interim conclusions:

1. Shrinkage varies considerably, depending on the type of aggregate used and also on the method of curing. In general, shrinkage is inversely proportional to the weight of the unit, with some minor exceptions.

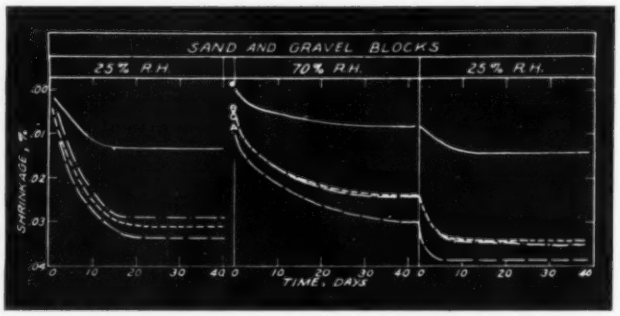
2. High-pressure steam curing of full-strength units reduced shrinkages by approximately one-half compared with other curing methods (with pumice it was approximately one-third).

3. High-pressure steam curing of full-strength cinder, expanded shale, expanded slag and sintered shale aggregate units resulted in shrinkage values which were as low or lower than for sand-gravel units cured by any other method except high-pressure curing.

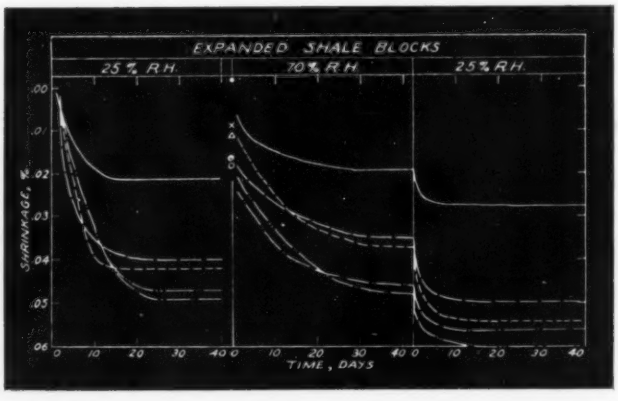
4. The specimens, except those cured at high pressures, showed a residual shrinkage when they were again saturated after the first drying, the amount depending on both the aggregate and the method of curing. The resaturated units shrunk approximately the same amount during the second cycle as they did in the first, except for those cured at high pressure, which had little or no residual shrinkage.

5. Results on leaner mixes (giving approximately half strength) showed some marked decrease in shrinkages for units cured at atmospheric pressures (73 to

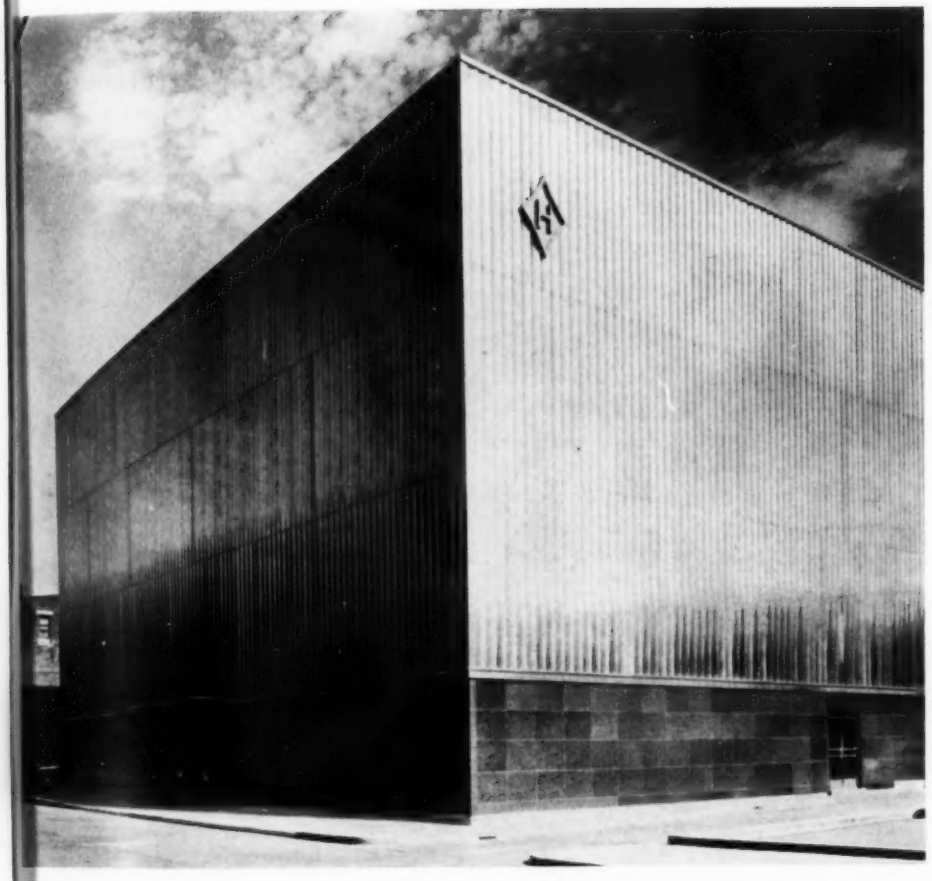
(*Continued on page 190*)

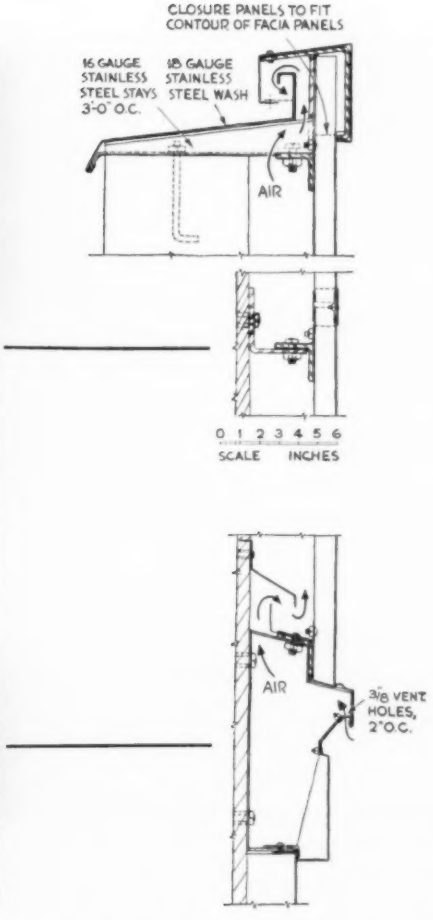


During tests, saturated concrete blocks were dried to constant length at 73 F and 25 per cent relative humidity. At the end of 40 days the blocks were resaturated and dried at 70 per cent rh. The relative humidity was then reduced to 25 per cent



* ***"Relation of Shrinkage to Moisture Content in Masonry Units," Housing Research Paper 25, Housing and Home Finance Agency, March 1953. For sale by Supt. of Documents, Washington 25, D. C., 25 cents.***




CLOSURE PANELS TO FIT CONTOUR OF FACIA PANELS
16 GAUGE STAINLESS STEEL STAYS 3'-0" O.C.
18 GAUGE STAINLESS STEEL WASH
AIR
0 1 2 3 4 5 6
SCALE INCHES
AIR
3/8 VENT HOLES, 2" O.C.

Unsightly grill work is eliminated by designing the stainless steel skin so that fresh air is drawn in at street level underneath the molding and exhaust air is discharged at the roof. Steel panels unify the original four-story structure and a three-story annex to which a fourth story was added. In addition a courtyard in between was filled in

A STEEL WALL THAT BREATHES

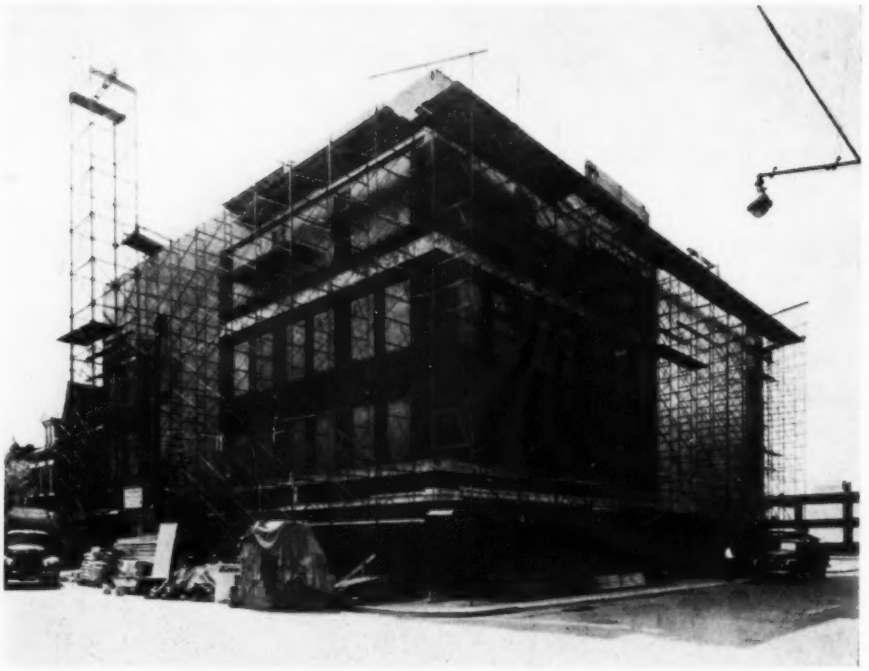
Modernized office building for the Heppenstall Co., Pittsburgh, Pa.

Hoffman & Compton, Architects

OF UNUSUAL INTEREST in this modernized office building is the way the stainless steel facia, parapet, parapet cover and roof were designed to make the building's air conditioning system more efficient.

No intakes for the air conditioning system are visible on the exterior walls. Instead, fresh air is drawn in through the openings at street level between the terra-cotta tile and the stainless steel molding (see sketches). Exhaust air is discharged at the roof. In this way there is a continual circulation of air between the stainless skin and the masonry wall to which it is attached. Unsightly grill work is eliminated, and the space between the skin and wall is thoroughly ventilated to prevent the formation of condensation.

The Heppenstall Co., a steel forgings manufacturer, originally occupied a four-story masonry structure built in 1918. Then a three-story annex was added in 1923. The problem was how to get more office space by joining the two old buildings in such a way that the new struc-



Windows of the old building were completely sealed before the stainless steel panels were attached. Terra-cotta tile serves as the base trim. Fresh air enters the wall just above the tile

STEEL WALL THAT BREATHES

(*Continued from page 176*)

ture would have a trim, unified appearance without looking like a patched up job.

The problem was solved by adding a fourth floor to the annex, building a new central unit to replace the courtyard, sealing all the windows and sheathing old and new portions with fluted stainless steel panels and a base trim of granite-like terra-cotta tile. The unified structure has 30 per cent more space.

Since the windows are completely sealed off, dirt and noise are kept out, and at the same time the air conditioning load is cut down.

Above: the parapet cover is conventional except that it forms an outlet for exhaust air. Both parapet cover and parapet are of stainless steel. Left: stainless roof panels were placed over felt

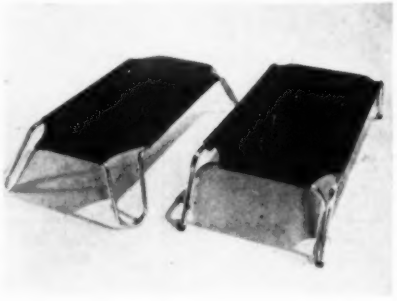
FLEXIBLE CLASSROOM FURNITURE IS DESIGN-WISE AND COMFORTABLE

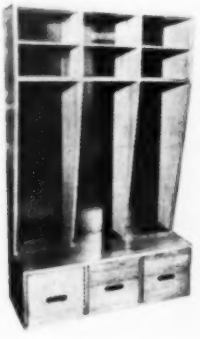
A new degree of flexibility in classroom planning has been introduced with the marketing of some ingenious classroom furniture by two firms.

• Stackability is the basic theme of *School Interiors Furniture,* which includes cast aluminum and tubular steel stacking chairs, molded plywood and cast aluminum stacking tables, desk units, clothing lockers and stacking cots. Light in weight and exceptionally sturdy, the units may be easily re-arranged for the conversion of study areas into play or conference areas. All wood laminates are bonded with urea-resin adhesives, and molded under hydraulic pressure with electronic heat, for maximum strength and resistance to moisture and extremes of climate. Designed for comfort and posture, the furniture is aimed at promoting the health and well-being of growing children. Colors and finishes are chosen to reflect light without creating glare. School Interiors Co., 5 University Pl., New York 3, N. Y.

• New engineering and design principles have been applied to the *Brunswick Line* of school furniture with the use of tubu-

(*Continued on page 192*)





▲

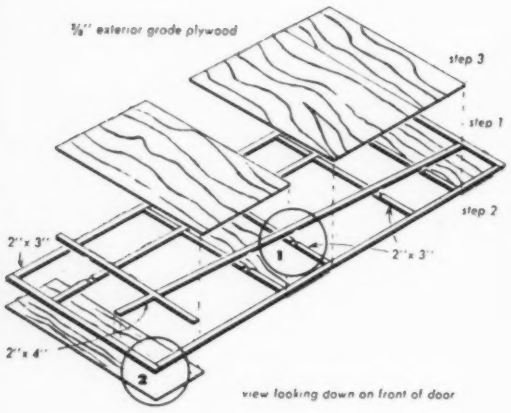
School Interiors *table-desks have rigid aluminum frame and hardwood writing surface. Standard and heavy duty cots with tubular aluminum frames come with blue or white covers. Birch laminates and cast aluminum form chairs; tables are molded plywood. Clothing locker is wood and perforated Masonite*

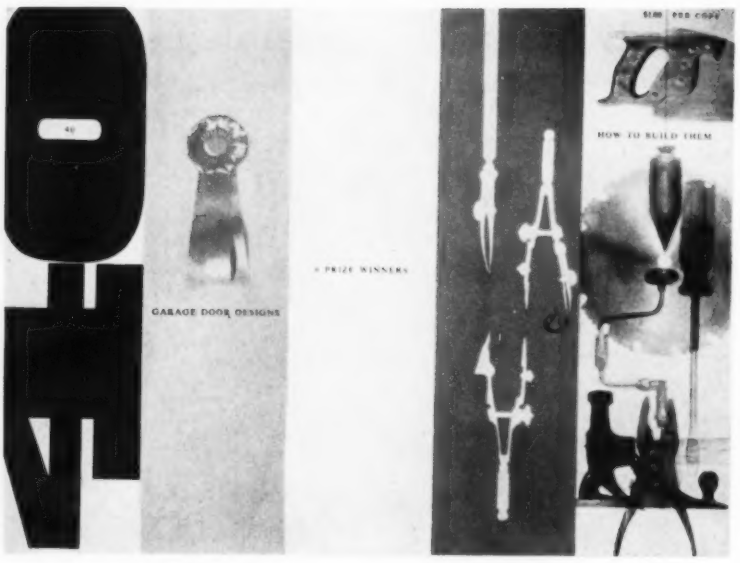
▶

The Brunswick classroom chair is easily converted into a tablet-arm or lounge chair by the addition of detachable units. Lift-lid combination has spacious book storage. Teacher's desk is movable conference style. Individual open-front desk has maximum flexibility

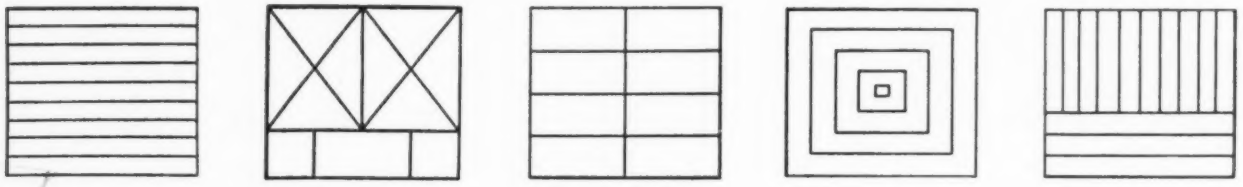
LITERATURE for the Office

GARAGE DOOR DESIGN





Above, left: construction detail of first prize design shown in booklet, right. Below: other suggested designs



40 Garage Door Designs — 6 Prize Winners & How to Build Them. Handsome little booklet, based largely on results of a garage door design competition sponsored by the Travert Company and the magazine *Arts & Architecture*, presents the six prize-winning designs in the contest, together with 14 other competition entries. These are illustrated with renderings and details and are accompanied by materials lists and construction procedure outlines. Small sketches of 20 other design possibilities using three basic framing schemes are included. John Kewell, A.I.A., winner of an honorable mention in the competition, contributes a short discussion of good garage door design as an introduction to the booklet. Also included is an illustrated outline of procedure for hanging a garage door with the manufacturer's hardware. Booklet is available free to architects, designers and architectural school libraries when requested on letterhead. Available to all others for $1. Travert Co., Paramount, Calif.

Paint Samples

Decorator's and Architect's Color Manual. Looseleaf book contains complete specifications for using paints. Second through fifth sections contain color cards on Liquid Velvet, Satin Finish, Lustre-Tone paints; give a formula mixing guide, a color scheme guide, and present an index to the large color sheets which follow. The large color sheets, 114 in number, are divided in half, so that contrasting colors may be matched alongside one half. Included in the 114 color samples are both standard and simple mixture colors, and the selection of hues is particularly good. The final section of the book has color cards on other Pre-Shrunk finishes, including quick-drying enamel, rubberized paint, concrete floor enamel, exterior paint and wood finishes. The O'Brien Corp., South Bend 21, Ind.

Sound Products

RCA Sound Products. Attractive brochure contains information on microphones, amplifiers, speakers, baffles, driver units and horns, intercommunication equipment, television antenaplex systems and unit-built cabinets and racks. Photographs of the various models of each unit are shown, with an accompanying textual description. 18 pp., illus. Engineering Products Dept., Radio Corporation of America, Camden, N. J.

Built-In Electric Ranges

Presteline Built-In Electric Ranges. Exclusive features of this large built-in oven are clearly described in this handy brochure. Photographs point out the convenience and freedom of design possible with eye-level oven and various available models of the range are shown. Installation information is included, complete with dimensions of the different models. 4 pp., illus. Presteline, 612 N. Michigan Ave., Chicago, Ill.

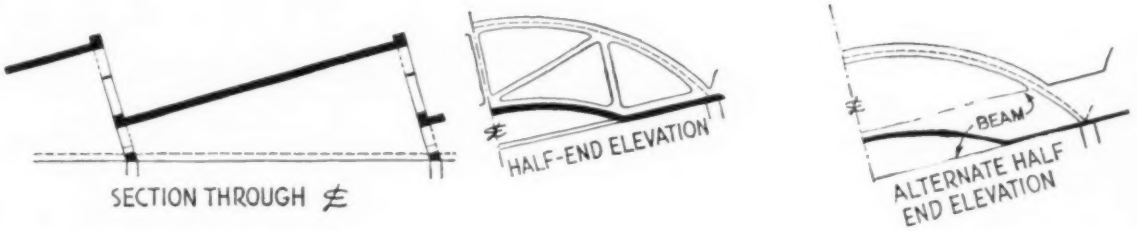
(*Continued on page 246*)

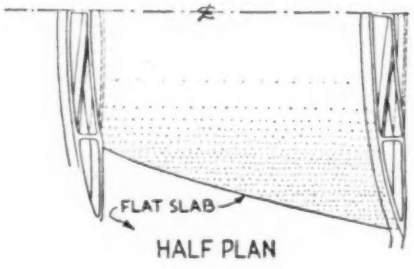
* ***For other product information see Sweet's Architectural File, 1953.***

STRUCTURAL FORMS—19: Thin Shells of Reinforced Concrete

By Seymour Howard, Architect, Instructor at Pratt Institute

A-1 CENTER(S) OF CURVATURE BELOW SHELL *(Continued)*

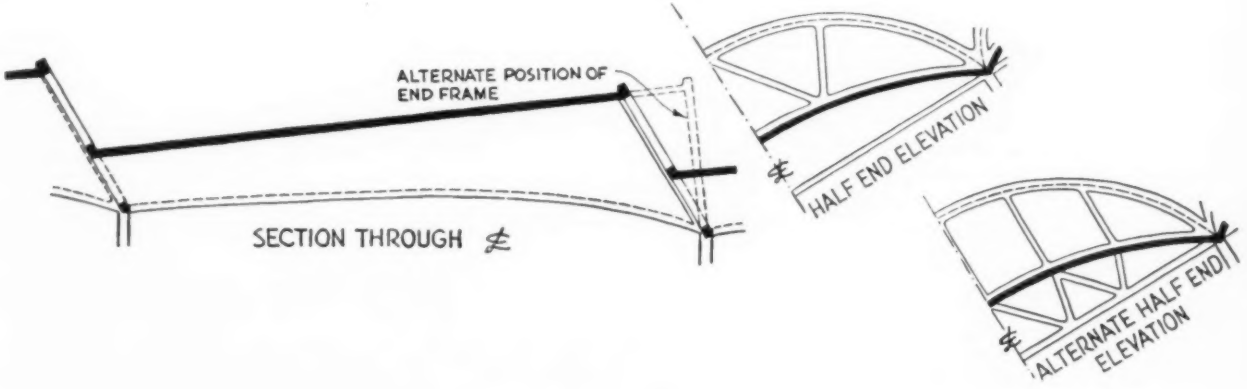


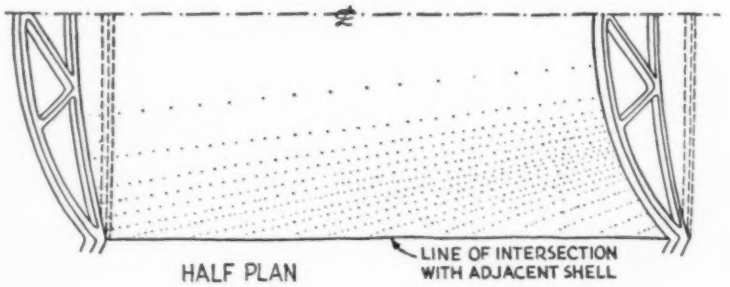


Tilted Cylindrical Shell

NOTE that: Shell has same radius of curvature throughout its length; intersection of shell and flat slab traces part of an ellipse in plan.

Awkward flat areas between shells can only be eliminated by using another type of surface for the shell, such as cone (see below) or a conoid (see later sheet on B-3, shells curved in two directions); or by using another type of surface for the area between shells (such as an inverted shell).





Tilted Conical Shell

NOTE that: Shell has radius of curvature which varies uniformly throughout its length; intersection of adjacent shells traces part of a hyperbola in side elevation.

If cone is not tilted and if shorter radius is not used at outside curve of end elevation, large flat slab portions would have to be used between shells, similar to those formed between tilted cylinders (see above and also later sheet on A-2 Center of curvature above shell).

If end frame is placed in alternate position (see section), at right angles to side of cone instead of at right angles to center line of cone, the end elevation of frame would show ellipses instead of circles.

Architectural Engineering
FILE SAVED STANDARDS

Lafayette Elementary School, Waterloo, N. Y. Completed 1951 at a cost of $550,000. Architect and Engineer: Carl C. Ade. Heating Contractor: A. Burgart, Inc.

COLD MEETS ITS WATERLOO
In Waterloo, New York

New York Community Modernizes its School System With New Schools and Tru-Perimeter Heating

When Waterloo, N. Y., decided its educational shoe was pinching they called on Carl C. Ade, prominent Rochester architect and engineer, to help remedy the situation.

Result – the handsome new Lafayette Elementary School illustrated here and the even larger Skoi-Yase (Indian for 'bubbling water') Elementary School now under construction. With these new schools, and its existing buildings, Waterloo has solved its educational space problems for many years to come.

For efficient, modern heating, both these new schools use Webster Walvector, as do many of the schools designed by Carl C. Ade's office.

Here is Tru-Perimeter Heating. The cold perimeter walls of the buildings are heated gently and evenly. There are no cold spots, no hot spots, no drafts. With Webster Walvector, the heating element and piping are concealed in attractive metal enclosures.

Webster Walvector in perimeter heating simplifies piping, uses fewer risers. Heating up is quick, effectively controlled. Buildings can be heated just before occupancy and the heat reduced immediately after the need is gone.

Whether you are contemplating new construction or modernization, look into the advantages of Webster Walvector. For complete information call the Webster Representative or write us

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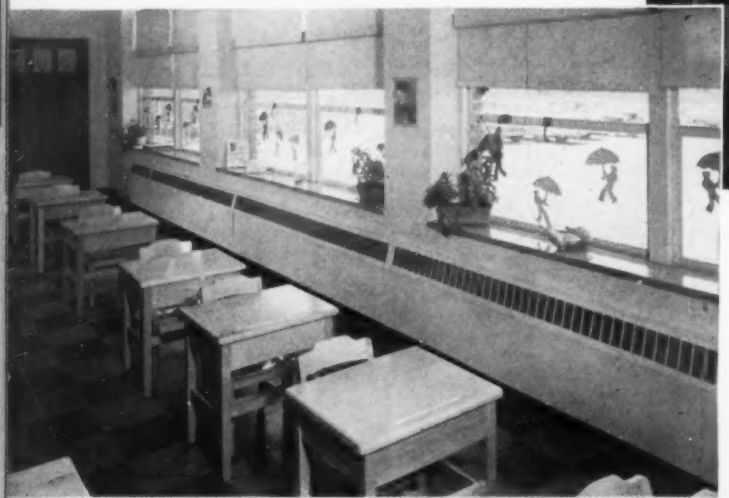
Recent New York State Schools by Carl C. Ade that use Webster Walvector

Elementary School, Fulton;
Britton Road School, Greece;
Irondequoit Jr.-Sr. High School
District #3, Irondequoit;
Pittsford Jr.-Sr. High School, Pittsford;
Griffith Institute, Springville;
Bryant School, Hornell;
Lafayette School, Waterloo;
Skoi-Yase School and Bus Garage, Waterloo;
Webster Central School, Webster;
West Webster Elementary School, West Webster

Above: Kindergarten of the Lafayette School. Here concealed Webster System Radiators deliver heat through top outlet grilles shown in window sills. Air enters below toy shelving.



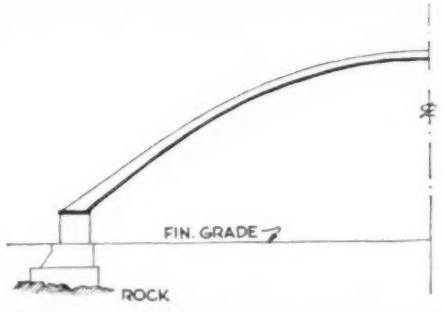
Left: Webster Walvector under windows in Lafayette School classroom. Air enters below Walvector enclosure, is gently warmed by heating element and passes out through the attractive grilles. Wall-to-wall warmth, no cold spots.

STRUCTURAL FORMS—20: Thin Shells of Reinforced Concrete

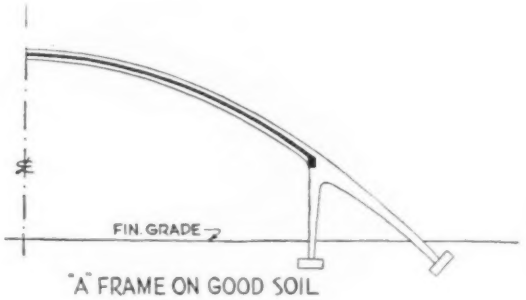
By Seymour Howard, Architect, Instructor at Pratt Institute

A-1 CENTER(S) OF CURVATURE BELOW SHELL *(Continued)*

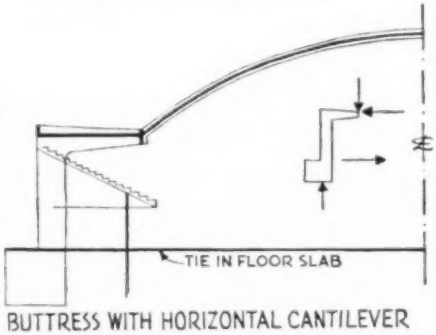
For short barrel shells the arch and its abutments become the primary consideration. Some typical sections:



PEDESTAL AND VERTICAL BUTTRESS ON ROCK
ON POOR SOIL, USE TIE BARS

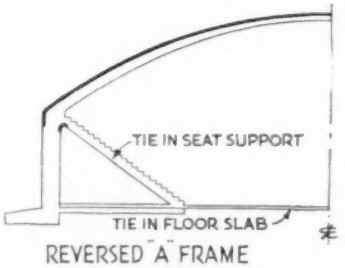


"A" FRAME ON GOOD SOIL

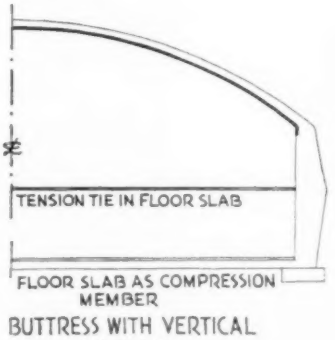


BUTTRESS WITH HORIZONTAL CANTILEVER

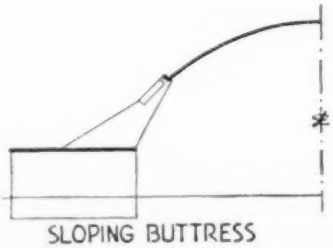
Horizontal component of arch thrust forms couple with tie, which is balanced by couple formed by vertical component of arch thrust and vertical reaction of foundation.



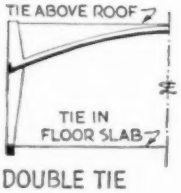
REVERSED "A" FRAME



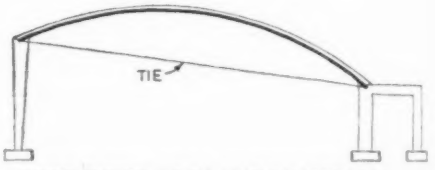
BUTTRESS WITH VERTICAL CANTILEVER



SLOPING BUTTRESS

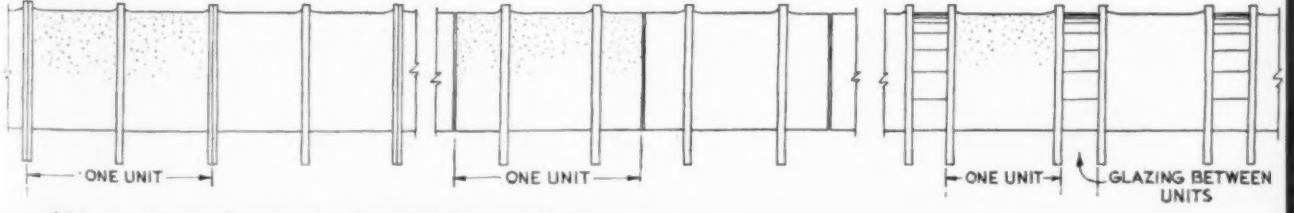


DOUBLE TIE



SIMPLE TIED ARCH, UNSYMMETRICAL

Transverse joints can be provided as shown in these three side elevations:



Joints are necessary for expansion, for construction convenience (limit of formwork) or to permit introduction of another element such as glazing.

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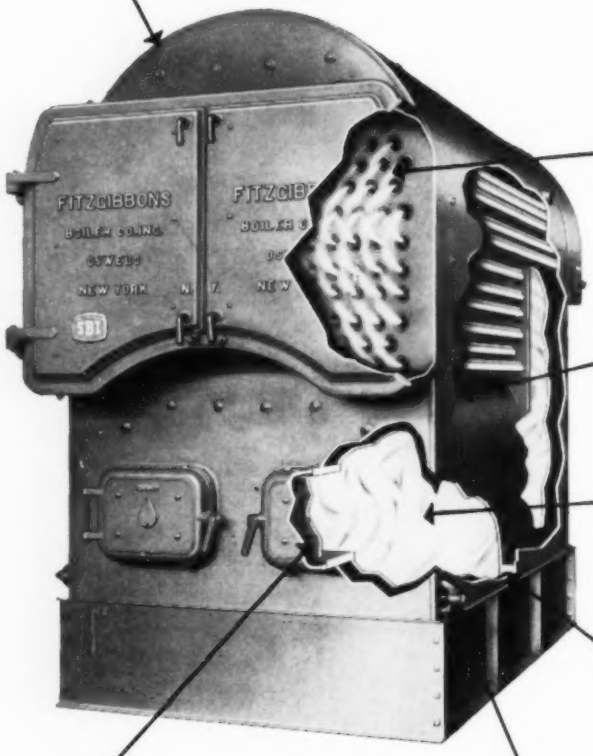

2 Easy Cleaning For All Surfaces — tubes are reached through large doors at front of boiler. Firedoors give ample access to firebox heating surfaces.

3 Rapid Water Circulation — concentration of heat at high point of crown sheet and unimpeded waterways induces faster circulation, brings more water in contact with more heating surface in a given time.

4 Complete Combustion — firebox of adequate height and volume provides maximum efficient burning of fuel. Ideal for oil, gas, or coal (stoker or hand-fired).

5 Welded Mud-Ring Design — a heavy steel bar is welded between sidewalls of shell and firebox to give added strength to water-leg section and longer life to the boiler.

6 Waterside Inspection — hand holes, 3" x 4½" large, permit complete inspection and cleaning of crown sheet and water-leg. From 6 to 14 hand holes depending on size of boiler.

7 Rugged Door Frame — water-cooled fire door frame of extra-heavy steel is welded between shell and firebox water wall. An asbestos gasket-sealed, soot-tight fire door completes the assembly.

All these features add up to economy, long life, and low maintenance cost. Fitzgibbons boilers meet or exceed ASME code requirements in all construction details; are certified by a Hartford Inspector. Sixteen sizes from 876,000 Btu to 10,200,000 Btu. For complete details, write to the Fitzgibbons Boiler Company, Inc., 101 Park Avenue, New York 17, N. Y. Ask for catalog AR-6.

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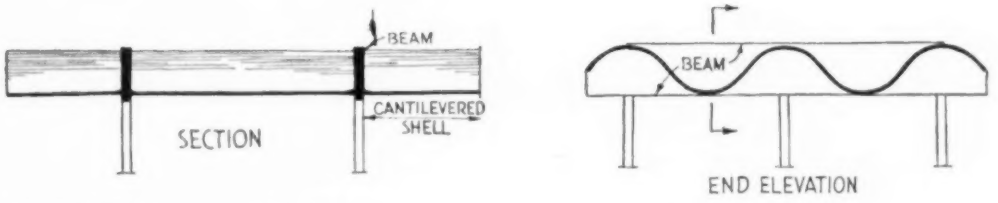
STRUCTURAL FORMS—21: Thin Shells of Reinforced Concrete

By Seymour Howard, Architect, Instructor at Pratt Institute

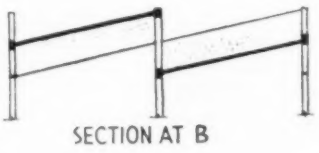
A-2 CENTER(S) OF CURVATURE ABOVE THE SHELL

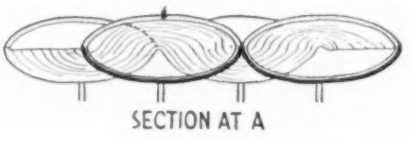
Inverted, concave shells are basically shapes best realized in tensile materials, such as wire or fiber rope, canvas, steel. The danger of buckling of the free edges of the shell requires stiffening or frequent bracing. Concave shells are therefore used chiefly as a supplement to convex shells, which have their centers of curvature below.

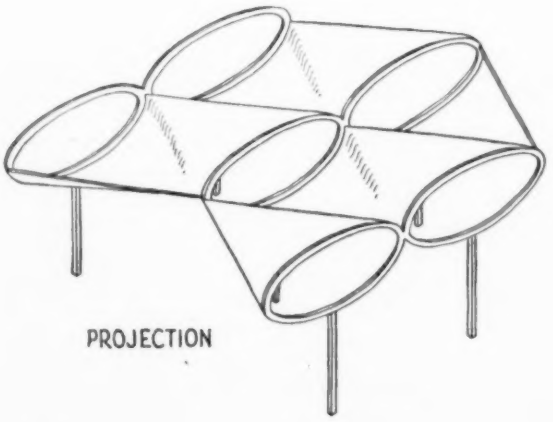


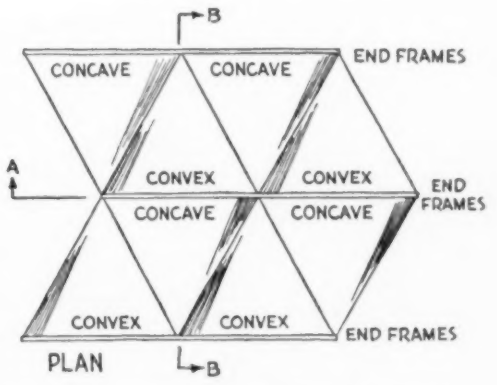
Typical Flat Corrugated Shell

Between the supports the concave part of the shell will carry the main tensile reinforcement. In the cantilevered ends the concave part will provide the main compressive strength. The shape of the corrugations has little statical importance; segments of circles are shown, but others may be used including the sine curve.





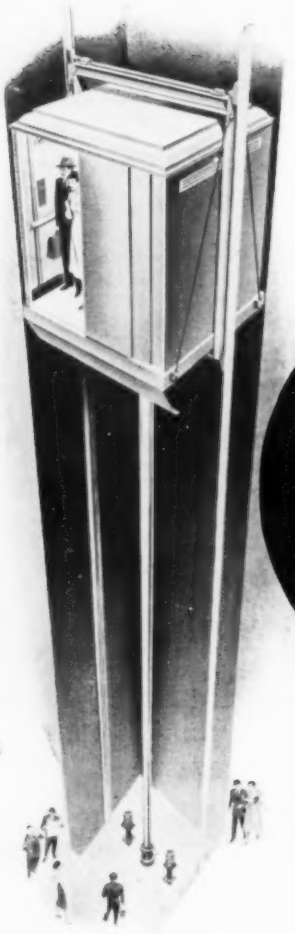




Inverted Shells Used to Fill Spaces Between Conical Shells

(Bracing members not shown in end frames, for clarity.) (This is a scheme of Architect Horacio Carminos and Engineer Antonio B. Aracibia of Argentina.)

TIME-SAVER STANDARDS Architectural Engineering

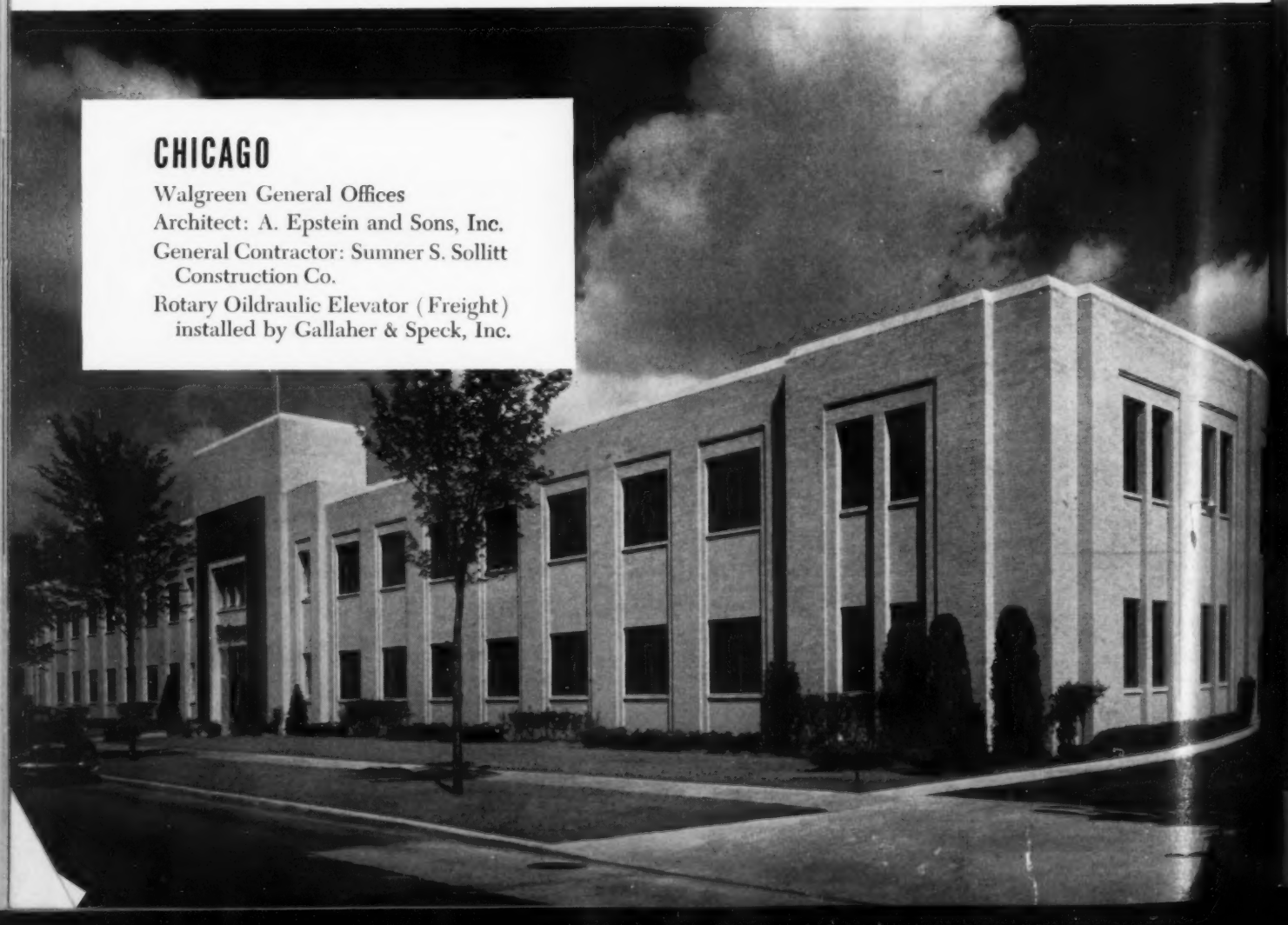


Smooth, safe, economical Oildraulic power supports and moves the elevator car

The trend is to

Rotary OILDRAULIC® Elevators

for modern buildings



CHICAGO

Walgreen General Offices
Architect: A. Epstein and Sons, Inc.
General Contractor: Sumner S. Sollitt Construction Co.
Rotary Oildraulic Elevator (Freight) installed by Gallaher & Speck, Inc.

No penthouse or heavy sidewalls

When you specify a Rotary Oildraulic Elevator you eliminate the costly, unsightly penthouse and substantially lighten the shaftway structure. This is possible because the elevator car and its load are supported by the hydraulic system—not the building structure—and because Rotary's compact power unit can be located on any landing or placed in an area with other mechanical equipment. These elevators are made for rises up to 50 feet, with capacities as high as 100,000 lbs.

Smooth starts, gentle stops, accurate landings

The Rotary Oildraulic Elevator is moved and controlled by oil under pressure, the most powerful and economical method of lifting heavy loads. The revolutionary Rota-Flow oil-hydraulic power system gives velvet-smooth starts and cushioned stops. Oildraulic automatic floor leveling positions the elevator car to each landing with exactness . . . ¼" accuracy guaranteed. The new Oildraulic Controller is a remarkable device that handles the functions of seven separate control valves . . . simplifies adjustments and maintenance.

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LOS ANGELES *(above)*

601 South Ardmore Building
Architect: Carrington H. Lewis
General Contractor: Robson-Berns
Rotary Oildraulic Elevator (Passenger) installed by Elevator Maintenance Company

EAST ST. LOUIS *(above)*

Alcoa Research Laboratory
Architect: Company architect
General Contractors: Fruin-Colnon Contracting Co.
Rotary Oildraulic Elevator (Passenger-Freight) installed by General Elevator Engineering Co.

MEMPHIS *(left)*

Julius Lewis Department Store
Architect: Hanker & Heyer
General Contractors: McNeese Construction Co.
Rotary Oildraulic Elevators (Passenger and Freight) installed by The Southern Company

(*Continued from page 176*)

170 F). High-pressure cured units did not show this general tendency.

6. None of the specimens reached dimensional stability at 40 per cent moisture content (ASTM standard specification for concrete masonry) either in the first drying cycle at 25 per cent relative humidity, or in the second cycle at 70 and 25 per cent relative humidity. In general less than half the shrinkage had taken place at 40 per cent moisture content during the first cycle. A few specimens approached dimensional stability at 40 per cent moisture when dried at 70 per cent relative humidity during the first part of the second drying cycle, particularly expanded slag.

Recommendations

If cracking of concrete masonry caused by shrinkage of units is to be reduced, the research so far indicates that the units should be cured and then dried until they reach equilibrium with the humidity conditions of the area in which they are to be used.

In long interior corridor walls subject to low wintertime humidities, sand-gravel masonry units cured at atmospheric pressure or high-pressure cured blocks made with cinder, expanded slag, expanded shale or sintered shale aggregates might be used to reduce the number of shrinkage control joints, since all of these have relatively low shrinkage. If the wall is non-load-bearing, low-strength units have less shrinkage than high-strength units and should be subject to less shrinkage cracking.

House designers might avoid long masonry walls by use of control joints concealed at door or window openings. Some authorities recommend that unreinforced concrete masonry partitions should not exceed a length of 25 ft between ends or control joints in heated buildings nor 40 ft in unheated buildings. For exterior walls these authorities recommend a maximum length of 50 ft between ends or control joints, with an optimum length half as long.

The work so far does not provide all the answers to reduction of shrinkage cracking. However, the following recommendations are suggested by HHFA:

1. Make sure that units cured at atmospheric pressure (170 F steam, 120 F steam or moist-air cured) are well dried before they are laid up in the wall (stack them under cover so that air will circulate beneath and through the stack either at plant or site).

2. Blocks should not be stored in contact with the ground where they will reabsorb moisture, and if hauled during rainy weather should be protected. Well-dried units which have been subsequently rained on should be dried under cover in ventilated stacks for at least one week.

3. Masons laying up concrete masonry should be cautioned against dampening the units just prior to laying except in very arid climates where slight dampening may be desirable. Some sort of cover should be placed on top of the unfinished work at the end of each day to minimize absorption of rainwater.

4. Insist on proper tooling of mortar joints in the faces of exterior walls exposed to the weather to minimize absorption of rainwater.

5. Protect exterior faces of concrete masonry walls, particularly where lightweight aggregates are used, by application of a weather-protective coating.

How about piping costs after installation?

Leaks. Repairs—that's where you find the potentially high cost of non-permanent piping in corrosive applications. And it's not just the cost of plumbing and new pipe—figure in plastering and painting.

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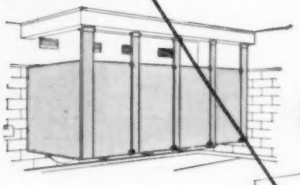
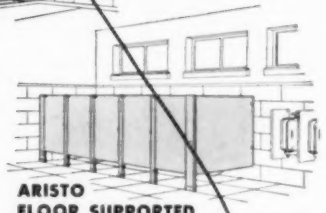
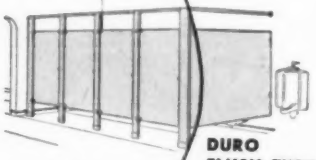


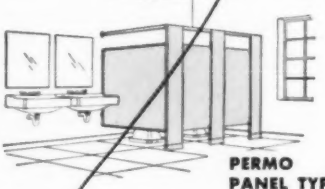
ARISTO CEILING HUNG



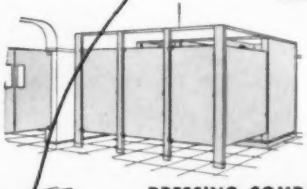
ARISTO FLOOR SUPPORTED



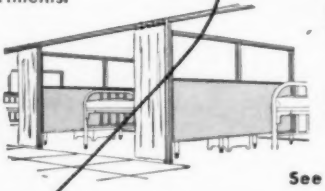
DURO FLUSH TYPE



PERMO PANEL TYPE



DRESSING COMPARTMENTS and SHOWERS



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PRODUCTS

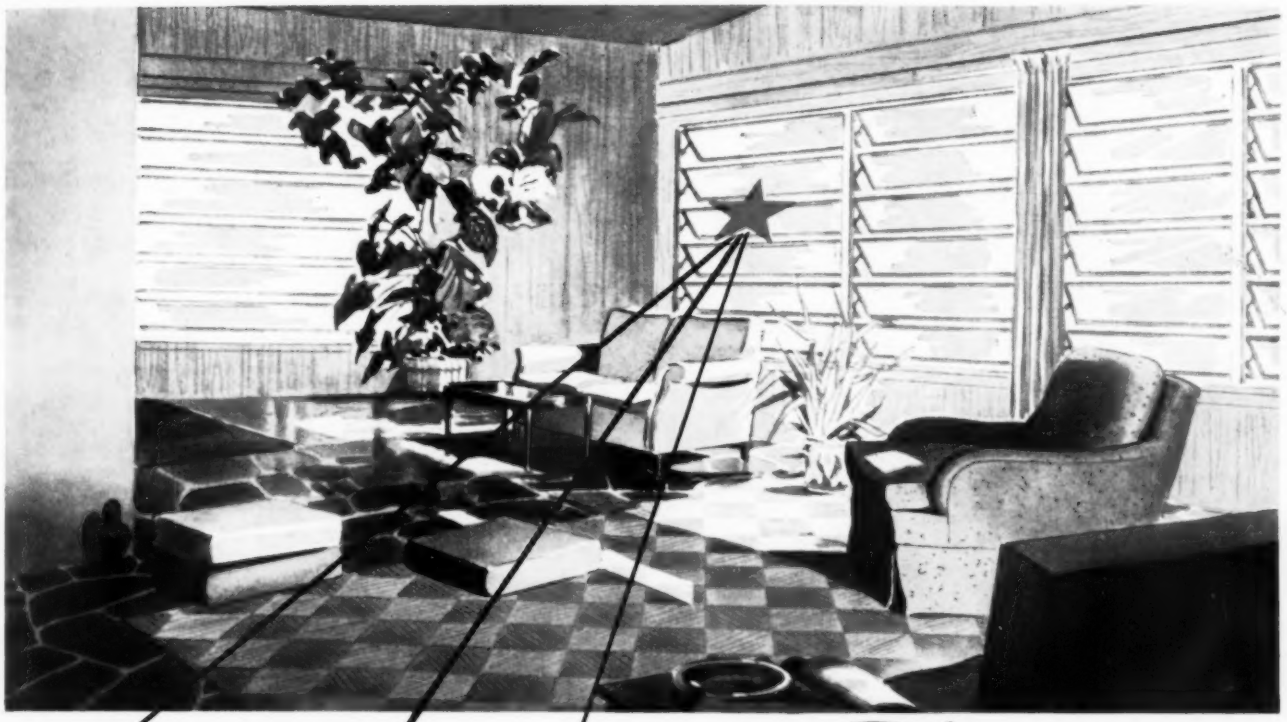
(*Continued from page 179*)

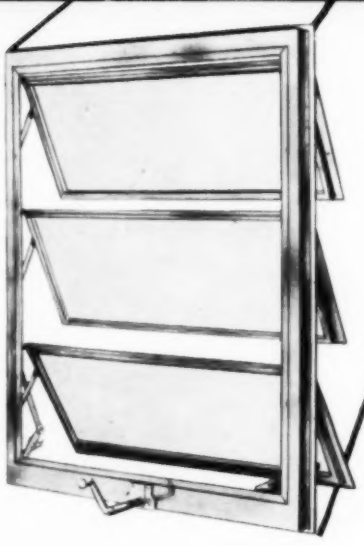
lar steel supports, which are reported to take pressures and stress from any direction, offering a certain amount of resiliency and spring in the units. As a departure from the old idea of placing seating units row-on-row in a stationary position, these new designs are meant to be moved about in a variety of desired positions. The basic student chair may be easily converted into a tablet arm chair, chair desk or lounge chair by the addition of separate units. A wire constructed book rack is an added optional item for the chair. Also included in the line are a guest chair, study top combination, book box combination, stackable desk, book box desk, all-purpose tables and teacher's table desk. Each of the units will be available in a range of sizes and in a choice of attractive colors. The units were developed by designer Dave Chapman. The Brunswick-Balke-Collender Co., 623 S. Wabash Ave., Chicago 5, Ill.

Plastic Tanks and Ducts

Iolyte, a Fiberglas reinforced polyester laminate, is now being employed in the manufacture of tanks and ducts which reportedly can be fabricated to specifications without limitations of size or shape. Since the material is a chemical-resistant structural plastic rather than a coating, it is said to eliminate problems of chipping, crazing, cracking or similar damage which can impair the effectiveness of coatings on steel tanks. The plastic is reported to withstand higher temperatures than vinyls, rubber, or polyethylene, and to afford the tensile strength of steel at only one-fifth its weight. Since no molds are used in their manufacture, tanks made of the material are untapered, leaving their entire area available. Ducts made of the plastic are said to be easily installed and are especially recommended by the manufacturer for use in installations subjected to corrosive fumes. Economy of manufacture and fast delivery of order are among further advantages cited by the manufacturer. Schori Process Div., Ferro-Co Corp., 81-11-43rd Rd., Long Island City 1, N. Y.

(*Continued on page 196*)





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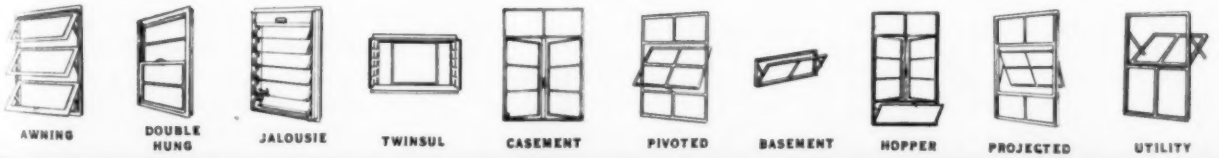

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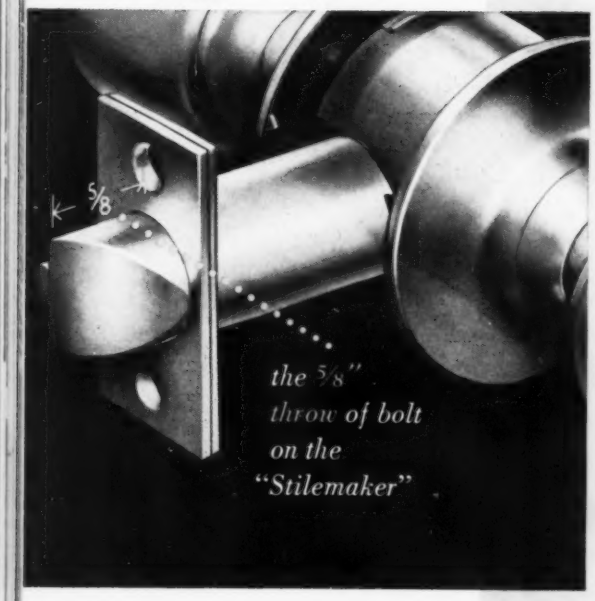
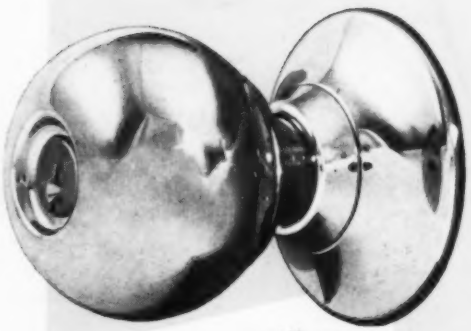
The "Stilemaker" has Fire Underwriters' Laboratory Approval



In recent tests conducted by the Fire Underwriters' Laboratory of Chicago, the "Stilemaker" met the rigid requirements for class B, C, D and E Doors. Its ⅝" throw bolt is designed to keep doors safely shut even through fire may buckle or expand them . . . thus the need for special length throw bolts is eliminated . . . saving money and time.

"Stilemaker" locks and latches have a number of special features that appeal to architects and builders. Let your Russwin Distributor demonstrate their advantages. Russell & Erwin Division, The American Hardware Corp., New Britain, Conn.



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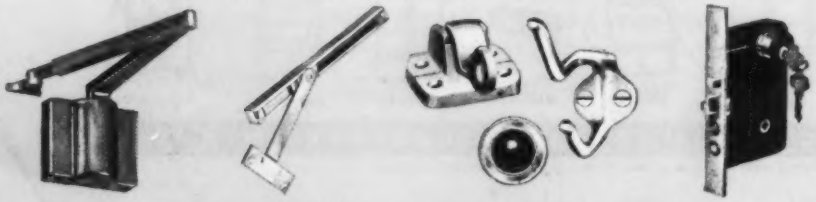


"400" Closers | Overhead Door Holders | Miscellaneous Hardware | "Ten Strike" Cylinder Locks

PRODUCTS

(*Continued from page 192*)

Planning Service Offers Library Scale Models

"Three-Dimensional Planning," a new library planning service available to architects specifying Sjöström *New Life* library furniture, permits the client to visualize how his library will look, in advance of its completion. Following the architect's plans, scale models of the manufacturer's furniture are set in place and a photograph is taken of the layout. From a complete set of accurate ½-in. scale models, the shelving, tables, charging desk and other items needed for the library are selected by the manufacturer's planning staff. These models are placed in position on a planning table which has been properly scaled to conform with the dimensions called for in the architect's plans. When all the elements have been positioned and all requirements have been met, the miniature layout is photographed. The photos are then attached to the draftsman's layout and forwarded to the client. Library design, furniture arrangements and available floor space are clearly indicated on the photographs. After the library has been completed, the photographs can be used in analyzing traffic flow, should changing library functions necessitate rearrangement of the furniture.

Planning service furnishes client with photograph like this of library layout. Scale is indicated here by cigarette

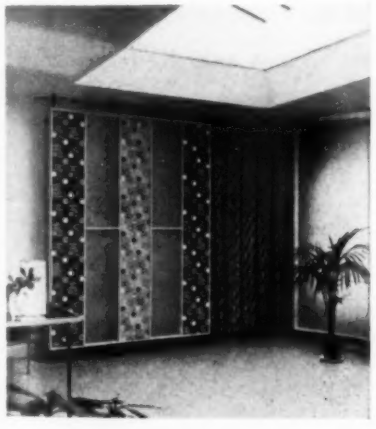
The whole service procedure is de-

PRODUCTS

scribed as quick, simple and involving no delays. Full information may be obtained by writing the manufacturer. John E. Sjöström Co., Library Planning Service, 1727 N. Tenth St., Philadelphia 22, Pa.

Skylighted Showroom for Fabric Display

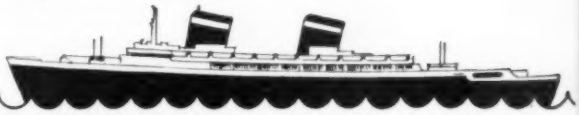
A new line of decorative fabrics was introduced recently in the new showroom of Ben Rose. Translucent plastic screens, repeating the skylight motif and reflecting light from the walls, are used to hold the fabric displays. The new group of fabrics includes six designs: *Big Wheels* and *Little Wheels*, two designs of the same motif in different scale; *Roman Numerals*, an angular, all-over design; *Buttons*, which take on mushroom shapes; *Eclipse*, a series of ovals; and *Diamonds*. All of the new patterns have coordinated wall papers, and both papers and fabrics come in a wide color range. All of the designs are small in scale and are printed on three different weights of textured, imported linen. Ben Rose, 41 E. 50th St., New York, N. Y.

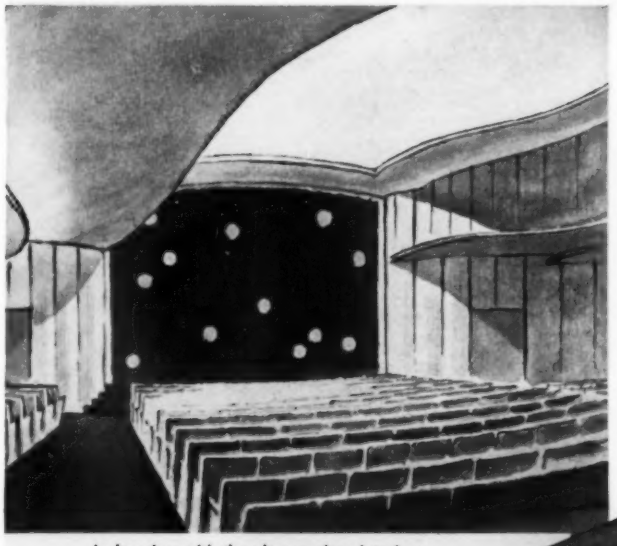


Translucent plastic screens are used to display fabric line in new showroom

(*Continued on page 200*)

On the world's safest, fastest super-liner . . .





In keeping with the ultra-modern interiors of the U.S.S. United States are the ultra-modern Russwin Door Closers.

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Exterior and fire doors on the luxurious U.S.S. United States are equipped with Russwin Automatic Door Closers. On every fire door is one of the extremely powerful, streamlined semi-concealed Russwin "400" closers. Structurally, this closer has no equal for strength, yet it is so compactly designed that it projects only 1¾" from the door face. Exterior doors have Russwin all bronze, surface-type door closers.

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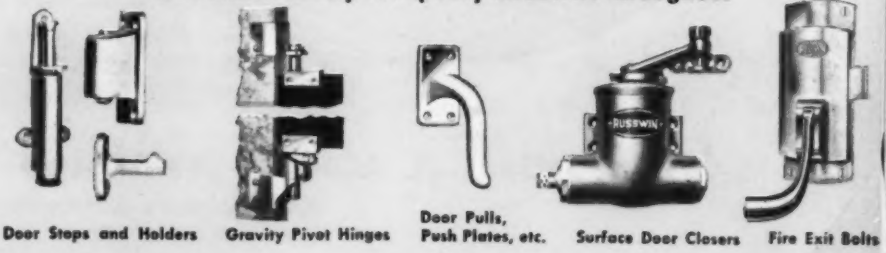
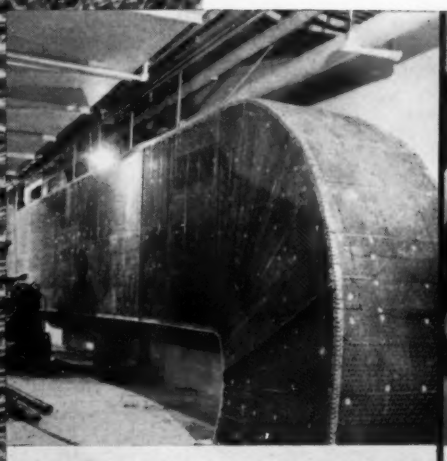
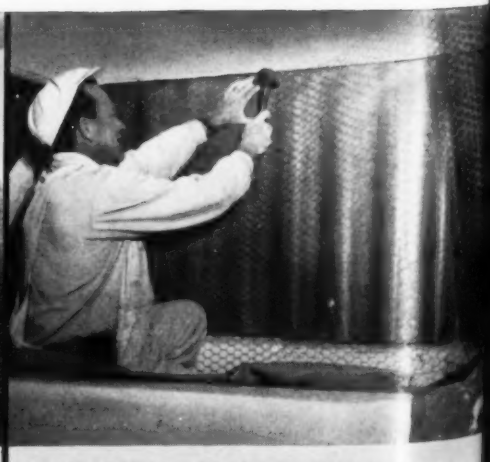


Door Stops and Holders | Gravity Pivot Hinges | Door Pulls, Push Plates, etc. | Surface Door Closers | Fire Exit Bolts

Proved on many thousands of types of reinforcing jobs all over the nation, the outstanding features of Keymesh make it the most versatile and *preferred* lightweight reinforcing obtainable. It is not only economical to use, easy to handle, but goes up fast, is noninjurious to the hands, provides smooth troweling, and really reinforces through its open-mesh design. The reverse twist weave and the hexagonal mesh design provides multidirectional reinforcing as well as greater bonding surface.



Keymesh used to provide a tight, durable key for insulation covering on supply ducts.



Applying Keymesh reinforcing as a base for interior tile. Notice the ease of handling.

see our CATALOG in SWEET'S FILE

Keymesh reinforcing lays flat as a strong, crack-resistant underbed for terrazzo floor—a more attractive and durable floor results.

KEYMESH GALVANIZED REINFORCING

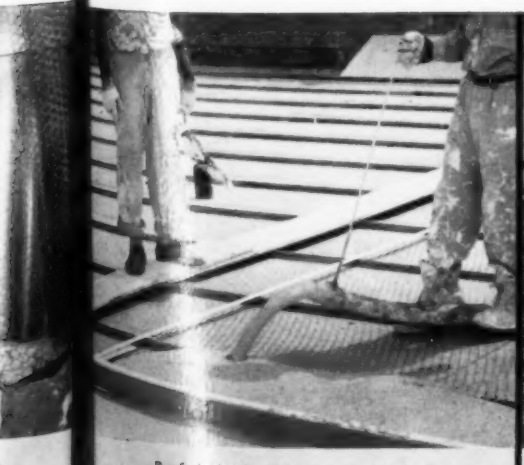
the most versatile lightweight reinforcing you can obtain

As tile or terrazzo underbed reinforcing or used with concrete, mastic, oxychloride, asphalt emulsion and other finishes for *floors and walls*—Keymesh has gained wide acceptance and preference. It is easier to handle on the job, rolls out flat, and provides multi-directional reinforcing with greater bonding surface through its reverse twist weave and hexagonal mesh design.

Keymesh also assures a firm, crack-resistant base for any type of *roof deck* finish applied over a "mix" substance. In addition, it makes an easy-to-apply base for the insulation of large air ducts, pipe lines, outside tanks and vaults. Tile or similar surfacing installations applied over tubs, in showers, or in complete bathrooms remain water tight and structurally sound when the base is reinforced with Keymesh.

In fact, Keymesh will provide more permanent reinforcement for lasting quality and beauty on any location where stucco, plaster, concrete, or any finish over a "mix" base substance is used.

ASK YOUR SUPPLIER ABOUT KEYMESH



Roof deck installation starts with the application of Keymesh reinforcing in easy-to-handle rolls.

Keymesh reinforcing was nailed direct to old floor. New floor surfacing is being applied here over the reinforced base.

Keymesh reinforces plaster or any base for wall or floor tile assuring maximum crack resistance.

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WRIGHT RUBBER TILE

Your judgment in specifying one floor over another must ultimately stand the test of customer satisfaction.

Why gamble your own good reputation? You can specify Wright Rubber Tile with the confidence that here is the world's finest floor covering . . . made to stand 100 years of normal wear.

This is the miracle flooring you've been hearing about. Being non-porous, it repels dirt. Being highly resilient, it resists damage and absorbs sound. Being uniform in color and quality from top to bottom, it has no surface veneer to wear off, and so stays smooth and beautiful throughout its long life.

Economical—Because of its exceptional durability, cost per year of Wright Rubber Tile is less even than inferior floor covering.

Versatile—Because of its high resistance to damage, Wright Rubber Tile is ideal for all types of construction, industrial, commercial and residential. Twenty-three decorator colors to choose from.

Easily Maintained—All floors require maintenance, but Wright Rubber Tile requires *less* than any other.

We invite you to compare Wright Rubber Tile with any floor covering on the market. Send for a free sample. Then specify Wright Rubber Tile with complete confidence.

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5205 Post Oak Rd., Houston 5, Texas

WRIGHT RUBBER TILE

4089

FLOORS OF DISTINCTION

- **WRIGHTEX—Soft Rubber Tile**
- **WRIGHTFLOR—Hard Surface Rubber Tile**
- **WRIGHT-ON-TOP Compression Cove Base**

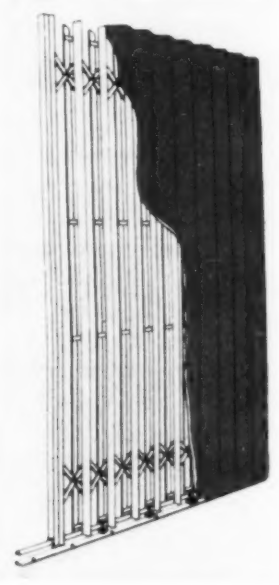
Architectural Engineering

PRODUCTS

(*Continued from page 197*)

Accordion-Folding Door

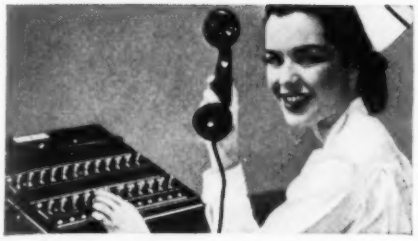
Said to be easily and quietly operated, the new *Extendoor* utilizes the extendible "X" principle — employed for baby gates and telephone racks. This extension device sets up a continuous chain of leverages and pivots which result in simultaneous and uniform action throughout the entire width of the closure. Applications may be as a single door, double door — for wider openings, room dividers or partitions, and either a



Cut-away section illustrates the scissor-like action of extendible "X" principle in new accordion-folding door

curved or straight track installation may be obtained, depending upon the architect's specifications. The interior framework consists of vertical, full height panels which are reportedly rust and mildew proof and rigidly strong, giving a permanent backing to the fabric folds. The exterior covering is durable, flame-resistant vinyl-coated fabric in a choice of colors. For large installations, a motorized model is available, which, in the event of a power failure, may be operated by hand. Extendoor, Inc., Subsidiary of E. H. Sheldon and Co., Muskegon, Mich.

(*Continued on page 205*)



SAVES STEPS, TIME, EFFORT...
Edwards Soft Speaking Nurses' Call System makes life easier for nurse *and* patient. Patient can make known her needs before nurse goes to bedside.

SPLIT-SECOND ACCURACY!
Every clock — one, ten or a hundred—tells precisely the same time, thanks to Edwards centrally controlled Clock and Program Systems. No Master clock is needed.

TRIM, MODERN, EFFICIENT:
Edwards Fire Alarm and Watchman's Systems are chosen by leading architects to protect America's schools, hospitals and important buildings.

EDWARDS
protects..everywhere!

PRODUCTS

(*Continued from page 200*)

Luminous Decals

An interesting range of possibilities for architectural applications is afforded by a newly developed luminous decal which can glow in the dark up to 10 hours after only a minute's exposure to natural or artificial light each day. The decals are already being used for signs (such as exit markers) and for safety markers. Described as the first successful application of a luminous effect to decals at a price which is not prohibitive, the process does not depend on radium active materials and the decals are neither poisonous nor otherwise harmful. They can be used for exterior applications, since they have an all plastic coating which is resistant to the action of water, gasoline, oils, alkalis, acids and adverse weather conditions. The decals can be made in any size and shape and with any combination of colors. The manufacturer offers the services of his development staff in helping to work out new applications. Luminous Decals, Avon, Ohio.

Plastic Glare Shields For Windows

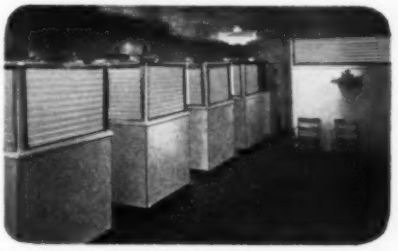
Filterzone Thermo-Glare Shields, vinyl glass-adhering shields designed to cut sun glare, are now available for application to window areas of factories, drafting rooms, schools, stores and other types of buildings. Reported to offer an effective method of toning down sky brightness and direct sunlight, the shields are made of a tough, chemically inert, flame and acid-resistant vinyl plastic which can be secured permanently to glass and can be removed easily whenever it is desired. The shields can be applied simply by pressing them against wet glass. They are said to eliminate the need for painted windows or blinds and to provide thermal insulation with resultant reductions in air conditioning loads. Supplied in a variety of colors, the shields may be purchased either in sheet form or pre-cut to window dimensions. Filterzone Autovision Co., 641 Lexington Ave., Brooklyn 21, N. Y.

(*Continued on page 208*)

DESIGN UNLIMITED
with original
Alsynite®
TRANSLUCENT FIBER GLASS PANELS

● Alsynite is the ideal translucent architectural material. Shatterproof, feather-light. Can be sawed and nailed, installs like corrugated metal. Economical. Seven colors, corrugated or flat. Use Alsynite anywhere and everywhere for brilliant new effects. See our brochure in Sweet's Catalog.

homes...for skylights, window walls, patio roofs, awnings, shower stalls, etc. Ideal indoors and out.



commercial...for store fronts, office partitions, luminous ceilings, decorative effects, signs.

industrial...for unlimited daylighting ...skylights, side walls, etc. No framing needed.

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How Honeywell Customized Temperature Control helps promote

a $40 million annual business!

Specially designed systems help make new Chicago shopping center one of nation's finest

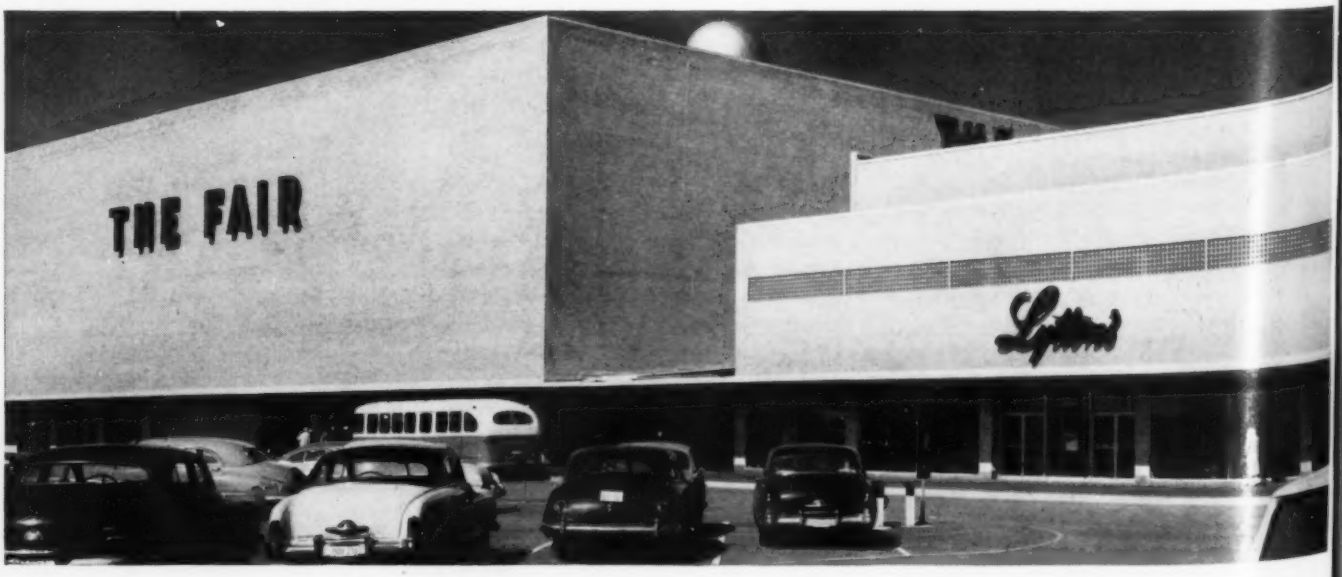
Evergreen Plaza is Chicago's newest (opened only last August) and biggest (6,100,000 cubic feet) shopping center. Projection of current business figures indicate that by the time the Plaza's first anniversary rolls around, turnover will have been $40 million.

Many factors account for the center's booming business. It's within easy reach of 500,000 shoppers. Nearly every type of retail outlet is represented. Parking space is generous, will accommodate 2,200 cars. Design is functional—and pleasant.

And most of the stores are equipped with Honeywell Customized Temperature Control—to help provide ideal customer comfort, good employee morale and economical use of fuel.

Individual stores chose the controls that best fit their needs—and budget. A wide variety of controls was available to choose from because Honeywell manufactures all three types of temperature controls—pneumatic, electric and electronic. And *only* Honeywell makes all three.

Large or small floor space, eastern or northern or southern exposure, occupancy by a small, select clientele or department-store-size crowds—all these varying factors were taken into account at Evergreen Plaza by Honeywell Customized Temperature Control.



Most of the smaller shops above have individual Honeywell thermostats. By adjusting these individual thermostats, store managers can provide the temperature employees and customers find most comfortable. Smokestack identifies project's central steam plant—controlled for most economical operation by Honeywell boiler room controls.

One or more thermostats on each floor of the larger stores below provides zoned comfort. Thus, in winter the first floor thermostat calls for heat required to compensate for cold air entering doorways, keeps first floor at same *comfort* level as other floors. Thermostats on other floors compensate for different occupancy, exposure and use problems found there.

Evergreen Plaza center was created by Arthur Rubloff, Arthur Rubloff & Co., Chicago; Howard T. Fisher & Associates, Inc., Architects & Engineers; Holabird & Root & Burgee, Architect-Engineer; George A. Fuller Company, Builders.

For comfortable, even temperature in new or existing buildings – of any size – use Honeywell Customized Temperature Control

Whether it's a shopping center, apartment, church, school, office, factory, hospital, garage—or any size building—new or existing, Honeywell Customized Temperature Control can help meet your clients' heating, ventilating, air conditioning and industrial control problems.

Once equipped with Honeywell Customized Temperature Control, they'll have an ideal indoor "climate"—and save fuel besides.

And with a complete line of pneumatic, electric and electronic controls to choose from, Honeywell Customized Temperature Control offers you the greatest flexibility in design. Then, too, when it comes to performance, Honeywell-built controls assure years of trouble-free operation. And they're backed by the finest service organization in the controls industry.

For full facts on Honeywell Customized Temperature Control, call your local Honeywell office. There are 104 across the nation. Or mail the coupon today.

Willard A. Brown, Rubloff's project managing director, says: "We have a great many different temperature control problems here at Evergreen Plaza. Honeywell handles them all extremely well. Fuel consumption is low, too."

MINNEAPOLIS
Honeywell

H HONEYWELL *First in Controls*

MINNEAPOLIS-HONEYWELL REGULATOR CO.
Dept. AR-6-122, Minneapolis 8, Minnesota

Gentlemen: I'm interested in learning more about Honeywell Customized Temperature Control.

Name _____

Firm Name _____

Address _____

City _____ *Zone* ___ *State* _____

PRODUCTS
(*Continued from page 205*)

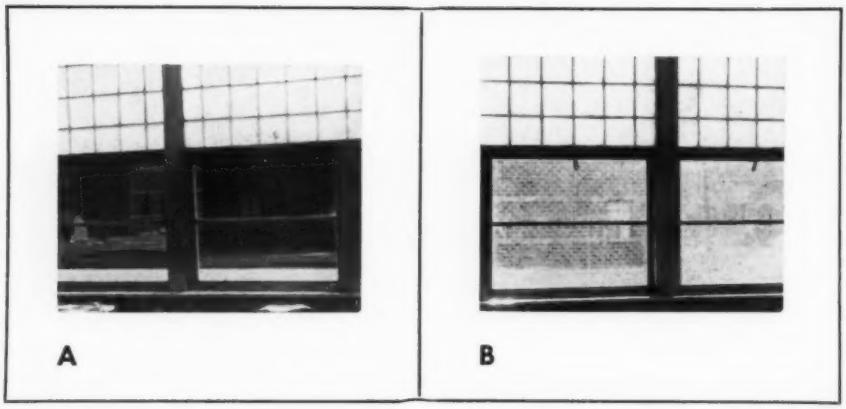
Glass for Brightness Control

Dusklite, a development of the Pittsburgh Plate Glass Company, is a new flat glass for installation in building areas which require brightness control. Especially designed for use with light-directing glass block panels, it is intended to provide relatively inexpensive light control for ribbon windows and ventilator units employed in conjunction with such panels in schools and other buildings. The product is composed of two layers of window glass laminated with an inner layer of neutral gray vinyl plastic, and it is manufactured by the same process as the manufacturer's "Duolite" glare-control automotive safety glass. The glass is neutral gray, color free, with a visible light transmittance of approximately 25 per cent and a solar heat transmittance of about 50 per cent.

The manufacturer reports that the glass will eliminate the need for supplementary light control from blinds, hoods, louvers or other shading devices. It reduces brightness to comfortable seeing levels and causes no appreciable modification of colors, either in the interior or outside. Adequate visibility of the exterior is provided, and a degree of daytime privacy is reportedly afforded, since the glass makes it more difficult to see inside whenever the outside illumination exceeds that of the interior.

The new product is recommended for glazing of elevations facing east, southeast, west, southwest, and points between these which are subject to exposure by direct sunlight. It has been tested both in practical installations and in laboratory classrooms. The glass will be furnished in a standard 7/32-in. thickness in sizes up to 15 sq ft. Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh, Pa.

(*Continued on page 210*)



A B

Effectiveness of new brightness-control glass can be seen in these photographs: A. an installation using light-directing glass block and new flat glass; B. an identical installation using conventional flat glass in vision strip

Hospitals are permanent...
and they need piping that endures!

CLOW (THREADED) CAST IRON PIPE IS USED FOR ALL WASTES, VENTS AND DOWNSPOUTS IN THE NEW WINGS AND CHAPEL OF THE BEAUTIFUL OAK PARK HOSPITAL FOR THE SISTERS OF MISERICORDIA, OAK PARK, ILLINOIS. ARCHITECTS: SCHMIDT-GARDEN & ERIKSON. PLUMBING CONTRACTOR: W. T. MAHONEY & SONS.

Add permanence to all buildings with CLOW (threaded) Cast Iron Pipe

Modern hospitals are today's most urgent building need. Because our hospitals will be as vital tomorrow as they are today, they are being built for strength and permanence.

In plumbing, for example, more and more architects and contractors choose Clow (threaded) Cast Iron Pipe for all downspouts, vents, and waste lines. They know that Clow Cast Iron piping will last the life of the building because of its remarkable resistance to corrosion.

They know, too, that installation cost and yearly upkeep will be gratifyingly low.

We will be pleased to give detailed answers to inquiries at any time.

A COMPLETE LINE FOR ALL PIPING NEEDS

Clow (threaded) Cast Iron Pipe has same O.D. as steel pipe, is available with plain or threaded ends, in 3, 4, 5, 6, 8, and 10" sizes in 18' random lengths. Also available with integral calking hub on one end (other end plain) in 18' random lengths in 4, 6, and 8" sizes.

Clow Cast Iron Pipe can be . . .

on the job, with ordinary tools of the piping trade.

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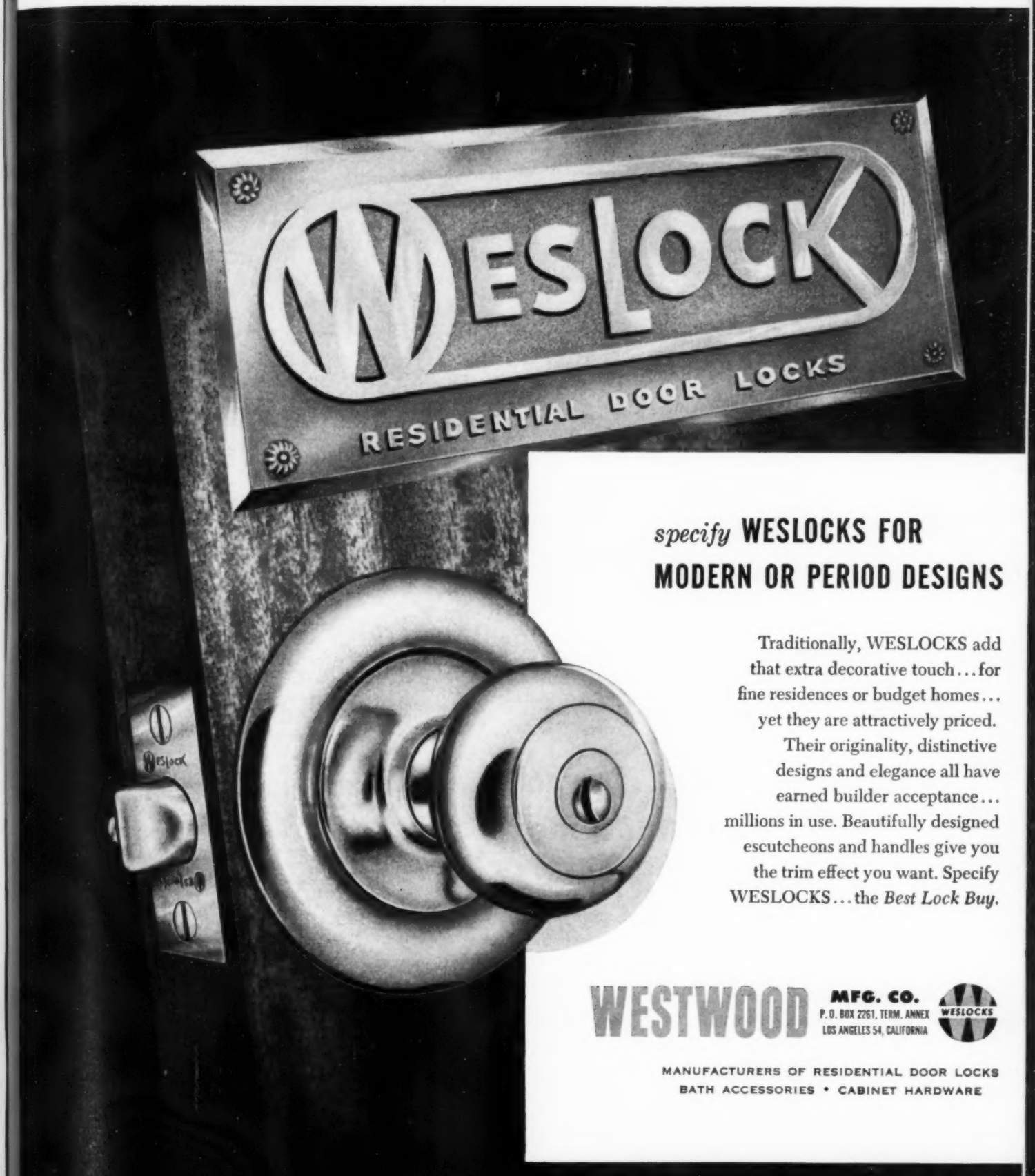
Publishers of the Clow Bulletin



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Traditionally, WESLOCKS add that extra decorative touch... for fine residences or budget homes... yet they are attractively priced. Their originality, distinctive designs and elegance all have earned builder acceptance... millions in use. Beautifully designed escutcheons and handles give you the trim effect you want. Specify WESLOCKS... the *Best Lock Buy.*

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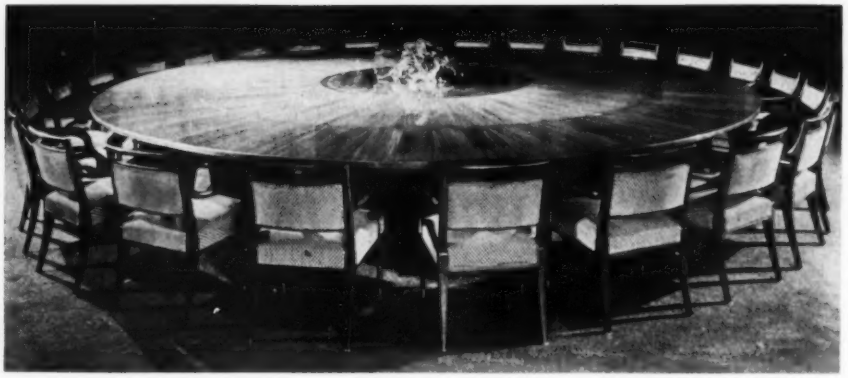
MANUFACTURERS OF RESIDENTIAL DOOR LOCKS
BATH ACCESSORIES • CABINET HARDWARE

PRODUCTS
(Continued from page 208)

Expansion Conference Table

Designed as a conference table which measures 12 ft in diameter, this dual-purpose table expands to 18 ft by adding to the periphery — large enough to seat 26 people at lunch. Constructed of mahogany, the table has a center of leather. Handsome and utilitarian, the conference table is an asset in large companies or corporations. Walter P. Sauer & Sons, Inc., 30–28 Starr Ave., Long Island City 1, N. Y.



Dual-purpose conference table expands to comfortably seat 26 people at lunch

Plastics Used in Case Pieces

A new line of occasional pieces, designed by Edmond J. Spence, has introduced the use of molded plastic drawer units in contemporary case pieces. Known as the *Keynoter Series*, the group contains 13 pieces, available in a choice of ash blonde Korina, dark mahogany or greyish limed oak. Advantages of the drawers being made of plastics are many: they are reportedly easier to keep clean; resist moisture, heat and chemicals; operate smoothly and do not stick—regardless of temperature and humidity conditions. The drawers are one-piece molded of thermosetting phenolic materials supplied by the Bakelite Co. The series includes cocktail, corner, lamp, end, and picture window table styles, utility cabinets and desks. Warren Furniture Mfg. Co., Paterson, N. J.

Protractor Triangle Adjusts for Drawing Angles

The *Alvin Tru-Angle*, an adjustable protractor triangle, is designed to permit rapid drawing of accurate angles from the base line. The device can be quickly set to gradations of one-half degree on either of two die-sunk gradation indicators, an outer row for angles from zero to 45 deg and an inner row for angles from 45 to 90 deg. The instrument is made of clear optical Plexiglas and is said to be shatterproof, heat resistant and impervious to wear, warp and discoloration. Available in 6, 8 and 10-in. sizes. The Alvin Co., Windsor, Conn.

(Continued on page 214)

CALVIN COLLEGE
Cafeteria
Student Commons
Grand Rapids

Architect and Engineer
J. & G. Daverman Co. • Grand Rapids

THE JOHN VAN RANGE CO
CINCINNATI, OHIO, U.S.A.
EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD

Van equipment helps college serve 1200 meals a day

• Calvin College is the latest in the long list of major educational institutions whose food service equipment needs have been supplied by Van. They stretch across the land . . . from Holy Cross in Massachusetts to Purdue in Indiana to the University of Texas . . . from Oklahoma A & M to Michigan State to West Point Military Academy.

• At this growing Christian Reformed college at Grand Rapids Van's equipment serves in the kitchen, the cafeteria, the private dining room as well as the student's snack bar . . . stainless throughout . . . a truly modern installation.

• For new kitchen or modernization, use Van's *century* of *experience.*

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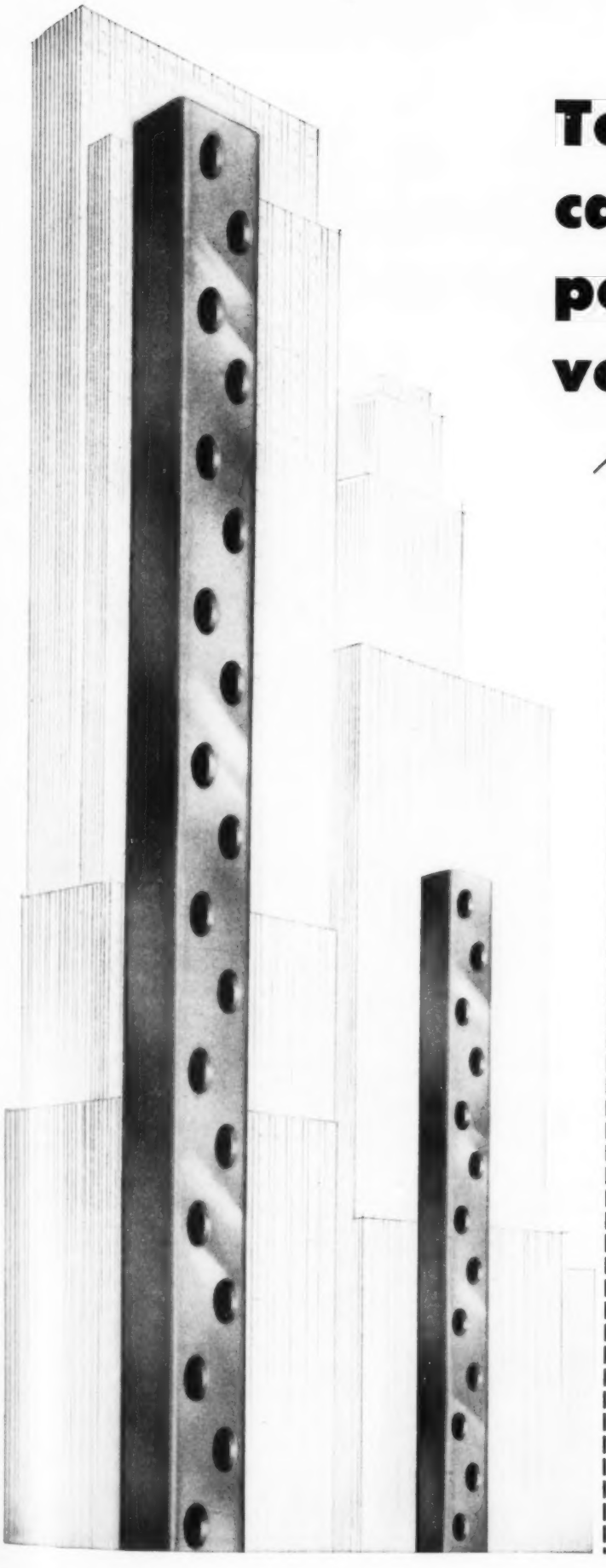

To carry power vertically

Chase Square Copper Tube Bus Conductors give you the high mechanical strength, electrical and thermal conductivity you need to carry power vertically. In hundreds of installations, Chase Buses are carrying the total electric energy with a minimum of short circuits, failures, overheating and other disturbances.

You'll find the same top Chase quality in ventilated square tube, flat rectangular and round copper tube bus. For further information fill in and send the coupon below.

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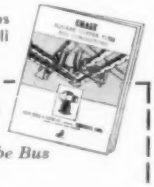
FREE Chase Bus Conductor Brochure gives physical and electrical characteristics as well as data on copper saving.



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Please send me the Chase Copper Tube Bus Conductor brochure.

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...Then **ALGRIP** Banished Slipping Accidents and Pared the Company's High Insurance Rates!

ELIMINATED: Crippling accidents that slashed production.

SAVED: Lost man-hours and high insurance premiums.

Take a machine tool, surround it with oil-filmed flooring, and you've set the stage for a tragedy. This one—in a southern industrial plant—cost a skilled workman his arm.

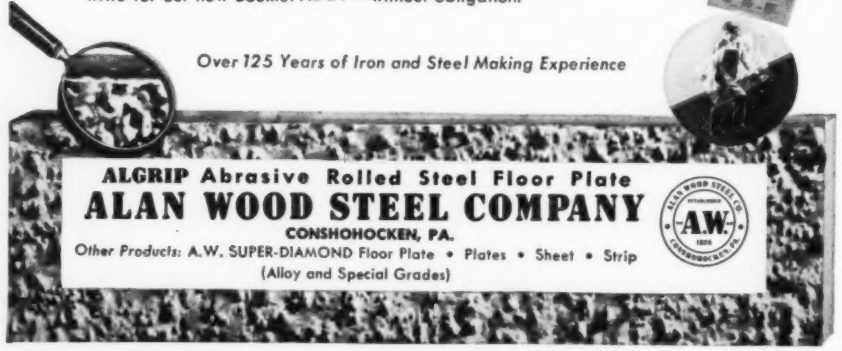
Then we installed A.W. ALGRIP Abrasive Rolled Steel Floor Plate. Result: No more slipping accidents! For tough abrasive "grinding-wheel" grain, rolled deeply and densely into steel plate, makes ALGRIP truly non-skid. It's almost impossible to slip on this hard-gripping floor plate—even when it's wet or oily—even on steep inclines!

Benefit: *A three-way saving . . . (1) No more costly, crippling accidents. (2) More efficient work and better production. (3) A substantial reduction of workmen's compensation insurance premiums—substantial enough, in fact, to pay for the cost of the ALGRIP installation!*

End Slipping Accidents that Cripple Men and Production—and Kite Insurance Premiums.

A.W. ALGRIP—only abrasive rolled steel floor plate in the world—pays for itself in savings from safety. Get the full ALGRIP story today; write for our new Booklet AL-21 —without obligation.

Over 125 Years of Iron and Steel Making Experience



ALGRIP Abrasive Rolled Steel Floor Plate

ALAN WOOD STEEL COMPANY

CONSHOHOCKEN, PA.

Other Products: A.W. SUPER-DIAMOND Floor Plate • Plates • Sheet • Strip (Alloy and Special Grades)

PRODUCTS

(*Continued from page 210*)

Safety Device For Operatorless Elevators

A device which prevents operatorless elevators from being overloaded beyond their rated capacities has been developed by *Otis*. The device uses the total weight of passengers in the car to operate a sensitive switch which automatically closes the doors and bypasses further hall calls until the car is lightened by discharge of passengers. Utiliz-

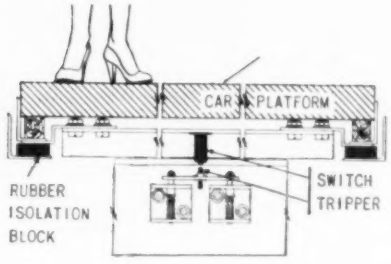


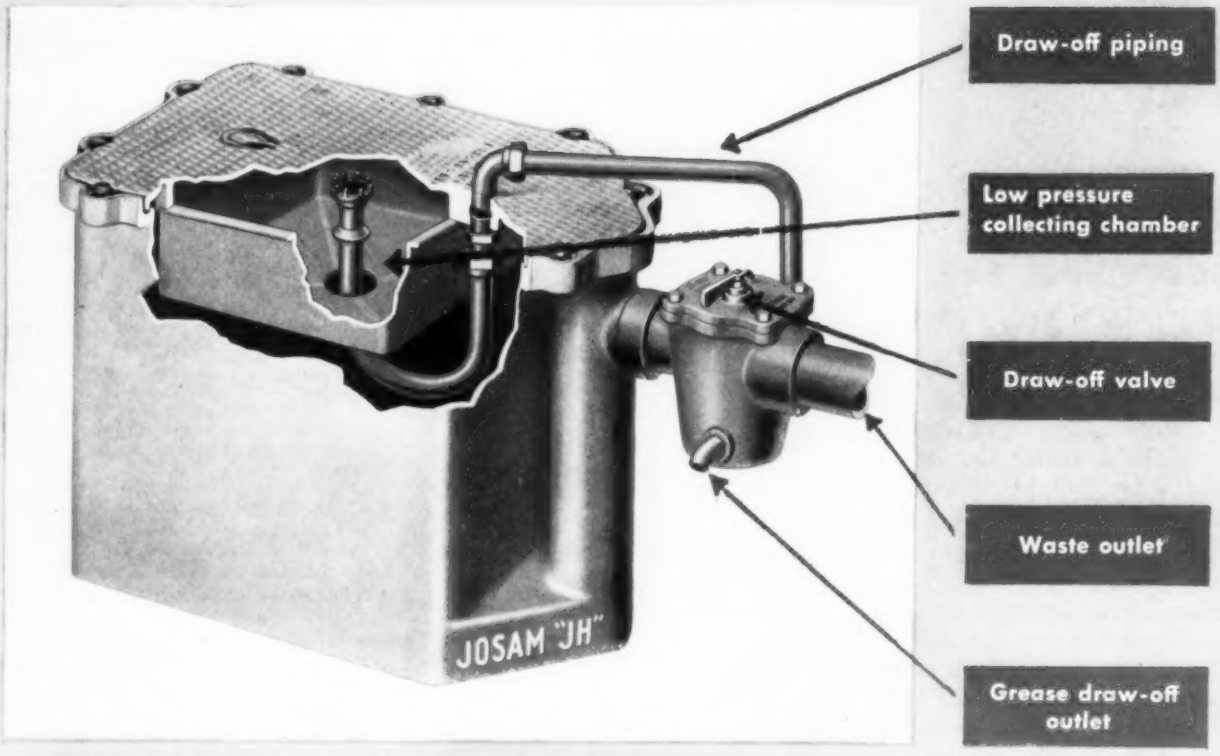
Diagram illustrates operation of safety device, described above

ing compressible rubber sound isolation blocks which were originally designed to isolate vibration of the car frame from the platform and cab, the device transmits load changes through the slight movement in these blocks to the switch, which is mounted under the platform. It is adjusted to operate when a predetermined percentage of the rated capacity — normally 80 per cent — has been reached.

Operation is as follows: (1) When the car is at a terminal floor and taking on passengers, the device goes into operation when the passengers who have entered total 80 per cent of the rated weight capacity of the car. When this point is reached, the doors automatically start to close and the car is dispatched without having to wait for its normal dispatching interval. In this way, valuable time is saved. (2) When the car is traveling downward and the passengers who have entered it weigh in the aggregate of 80 per cent of rated capacity, the device causes the car to automatically by-pass all additional hall calls (at the same time answering all

(*Continued on page 218*)

GREASE INTERCEPTOR



A PROVED DESIGN WITH A NEW PRINCIPLE. Using the basic design of the Josam Cascade Interceptor which for 27 years has been accepted as the "Standard of the Industry," Josam has applied a new principle called "low pressure" or partial vacuum. The standard principle of gravity separates grease from water because grease is lighter and floats to the top. In the "low pressure" chamber found only in the New Josam Series "JH" interceptor, the grease continues to collect in this chamber where it can be drawn off at any time ... without removing the cover.

THE GREASE FLOWS OUT OF DISCHARGE LINE AT TURN OF A VALVE. The grease collecting chamber may be emptied at any time simply by turning handle of control valve at outlet end of interceptor to the "draw-off" position. This closes the waste line and automatically opens the grease discharge line adjacent to which is placed a container to catch the liquid grease flowing out of the collecting chamber.

One handle... one turn controls the entire operation—it's so simple that a child can do it!

When all the stored grease is drawn off, the valve is turned to "on" position which automatically puts the interceptor back in operation for grease interception.

NO ODORS... NO MESSY GREASE REMOVAL. The intercepted grease in the collecting or "low pressure" chamber in this new Josam Interceptor is relatively pure and can remain in the collecting chamber without bacterial or decomposable action since these processes do not take place in a "low pressure" area.

As a result, the unpleasant odors and messy cleaning associated with grease interceptors which require the removal of the cover for cleaning, are now positively eliminated!

This is the interceptor that solves most grease problems —collects over 95% of the grease... evacuates heavier-than-water solids and sediments ... and discharges clean grease at the turn of a handle!

TYPES AND SIZES. Josam Series "JH" Grease Interceptors are available in a wide range of sizes. Its new design places it years ahead of any interceptor on the market. Only Josam gives you the automatic grease-evacuating feature — maintaining maximum efficiency and eliminating necessity of manual removal of grease.

JOSAM MANUFACTURING COMPANY
DEPT. A. R. • MICHIGAN CITY, INDIANA

Please send complete details on Series "JH" Grease Interceptor.

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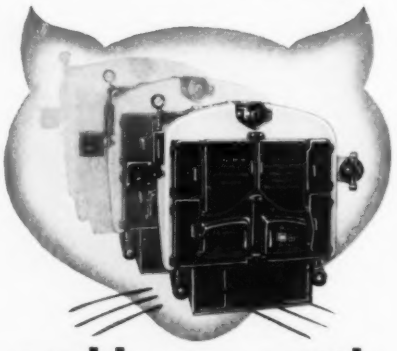
FIRM .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

When considering a boiler today



would you settle for 3 lives?

If history means anything, the H. B. Smith Boiler you recommend today will be on the job when the year 2000 is born!

That's because H. B. Smith Boilers are made of cast iron—universally acknowledged to have the longest life in boiler service. Furthermore, H. B. Smith Boilers are made of the *highest quality* cast iron, with self-cleaning vertical water tube construction that promotes top efficiency with least maintenance.

It's no secret that most conventional boilers used in larger buildings have a life expectancy of about 20 years. Whereas thousands of H. B. Smith Cast Iron Boilers have been in constant service for 40, 50—yes, even for 60 years, without ever a major repair.

Settle on an H. B. Smith Cast Iron Boiler today, and your client is *settled* for tomorrow.

H. B. Smith
CAST IRON BOILERS
A Century in '53
The H. B. Smith Co., Inc.
Westfield, Massachusetts

PRODUCTS

(*Continued from page 214*)

within-the-car calls) until the car is lightened. Hall calls that have been bypassed in this fashion remain registered and are answered by the next available car traveling in the direction desired. In this way, also, the device speeds service, by preventing full cars from being stopped. Otis Elevator Co., 260 11th Ave., New York 1, N. Y.

Summer Furniture

Wrought iron and colored canvas have been handsomely combined in the *Cabana Group*, designed by Paul McCobb. Although particularly suited to summer living, the chairs can make attractive additions to contemporary settings in all seasons. The canvas covers are available in black and white stripes (as shown in photograph) and in such other colors as

Indoor-outdoor furniture by Paul McCobb utilizes linear wrought iron frames on which colorful canvas covers are stretched. Other matching items are available

tangerine, terra cotta, natural, yellow, nile green, black burgundy, green, rust, and candy stripe of rust-and-gold or green-and-natural.

An accompanying tea wagon is also available in black metal with a textured frosted glass top. A shelf, located below the top, is finished in "Marlite" — as is the bottom of the basket, which is built into the lower portion of the wagon.

Both items are manufactured by Arbuck, Inc., and are available through B. G. Mesberg National Sales, 201 E. 57th St., New York 22, N. Y.

(*Continued on page 222*)

Call the Office Nearest You for Prompt Reynolds Aluminum Service to Architects

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Cleveland 15, Ohio, 1146 Hanna Bldg., Cherry 1-7214
Columbus 12, Ohio, 1384 Grandview Ave., Room 225, Kingswood 6444
Dallas 4, Texas, 3200 Maple Ave., Sterling 5186
Dayton 2, Ohio, 305 Eleven W. Monument Bldg., Hemlock 6344
Denver 2, Colorado, 639 Continental Oil Bldg., Main 8641
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Evansville 8, Indiana, 100 North Main St., 2-3231
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Grand Rapids 2, Michigan, Beverly and Porter Sts., 3-0156
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Indianapolis 2, Indiana, 1803 North Meridian St., Hickory 7527
Kansas City 2, Missouri, 297 Plaza Theatre Bldg., Jefferson 3536
Little Rock, Arkansas, 319 Commercial National Bank Bldg., 4-6472
Los Angeles 5, California, 601 South Ardmore, Dunkirk 8-7135
Louisville 1, Kentucky, 2500 South Third St., Calhoun 4731
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Peoria 2, Illinois, 807 Citizens Bldg., 4-9241
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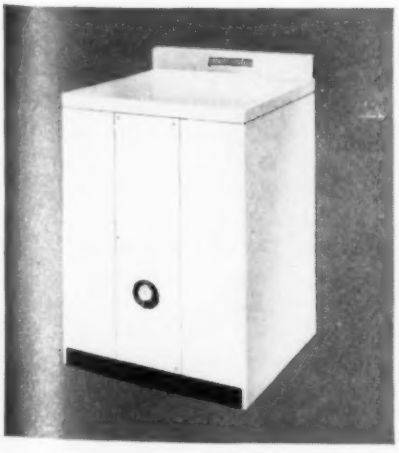
A G-E Kitchen-Laundry can be built right into a $10,000 house . . . and the monthly cost to the homeowner may be no more than that for a typical telephone bill.

- **See Sweet's Catalogue** for 24-page section on new General Electric appliances, or write for free architect's catalogue to: Home Bureau, General Electric Company, Louisville 2, Kentucky.

Matched appliances . . . designed for minimum space requirements.



G-E WATER HEATERS

All connections on Table-top Models are now located at top of tank for easy installation. Other models up to 82 gal.

G-E FOOD FREEZERS

Little floor space required for new 7-cu-ft freezer, and 11-cu-ft model. Also: A new G-E 14-cu-ft upright freezer.

G-E RANGES

New de luxe 24-inch and 36-inch models with spacious ovens conserve floor space, permit added counter and storage space.

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YOUR NEXT FRAMING JOB...
MEASURE THE SAVINGS POSSIBLE WITH

Penmetal 1869 Lightsteel
STRUCTURAL SECTIONS

LOWER INITIAL COSTS

Penmetal *Lightsteel* is strip steel, formed into strong structural sections on high speed cold-rolling and punching machines. The cold-rolling process keeps production costs down.

LOWER MAINTENANCE COSTS

Penmetal *Lightsteel* framing is permanent—provides structural stability, complete protection against warping, split, shrinkage, rot and termites.

LOWER INSURANCE COSTS

Penmetal *Lightsteel* is ideal for fireproof construction. Depending upon collateral material, fire resistance ratings range up to a full 4-hours

LOWER CONSTRUCTION COSTS

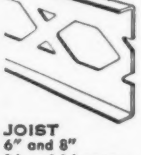
Penmetal *Lightsteel* sections are light in weight, easy to erect. They require no cranes, no special skills. Open webbing speeds through-frame installation of wiring and plumbing; metal lath or wall board is quickly clipped or wired into place.

METAL MARK Penmetal 1869 OF QUALITY

DOUBLE JOIST
6" and 8"
16 and 14 gauge

Lightsteel STRUCTURAL SECTIONS

Studs and joists are pre-cut to any length up to 28 feet; track and bridging comes in standard 20 foot lengths. Newly published, fact-filled booklet gives complete specifications; write for your free copy of Catalog SS-20.



JOIST
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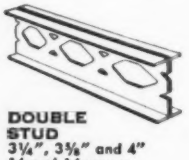
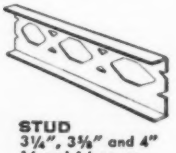
16 and 14 gauge



DOUBLE STUD
3¼", 3⅝" and 4"
16 and 14 gauge



STUD
3¼", 3⅝" and 4"
16 and 14 gauge

PENN METAL COMPANY, INC.
205 EAST 42nd STREET • NEW YORK 17, NEW YORK

PRODUCTS

(*Continued from page 218*)

Self-Binder for Pamphlets

Mooreslip, a new self-binder, is said to permit binding of wire-stitched pamphlets, catalogs, trade publications, sales manuals and periodicals in book form and in a matter of seconds. The binder reportedly combines the advantages of a loose-leaf cover with the appearance and readability of a book. It employs two flexible metal strips which slip through the staples of each pamphlet, holding them together tightly. The strips slide into slots in the back cover, binding the pamphlets securely as in a book which opens perfectly flat. Punching or mutilation of pages is eliminated and removal and insertion of single pamphlets is described as quick and easy. The binders are available in all sizes to fit individual requirements, with color and imprinting to suit needs of firms. Price is reportedly low. Mooreslip (U.S.A.) Ltd., 50 Church St., New York 7, N. Y.

Combination Lock Set for Screens and Storm Doors

The *Earle* No. 73 lock set, a new addition to the manufacturer's line of combination screen and storm door locks, has a five-pin tumbler cylinder which permits it to be keyed with existing Earle locks or to be master keyed with other locks. The set can be installed by boring two holes of 5/8-in. diameter and assembling. It will fit into the same mortise as the manufacturer's No. 733 set, which does not afford key-lock protection, and for which the new set is designed as a replacement. Made entirely of brass, the set has a drawn seamless case and through-bolt fastenings. The outside knob is pinned fast and a patented set screw is used for the lever. Double compression spring construction of the latch reportedly compensates for any slight drilling errors which may occur during installation. The set is said to function properly with door closers. It is supplied in polished and dull brass, dull nickel, and bright and satin chromium finishes. Earle Hardware Mfg. Co., Reading, Pa.

(*Continued on page 226*)

TUBULAR STEEL WINDOWS!

New Addition to Prime Window Line Makes Ideal Treatment For Added Wall Space, Bedroom and Bathroom Privacy, Above Sinks, Etc.

The F. C. Russell Company has now applied the proven engineering principles of its widely-accepted vertical-slide Prime Window to a new line of Horizontal Slide Windows. These Horizontal Slide Windows offer the same exclusive features and advantages. Frame and window members are of streamlined, rigid, tubular galvanized steel, bonderized and finished with baked-on outdoor enamel. They are supplied as completely finished assemblies and provide the same ease and speed of installation and convenience during construction.

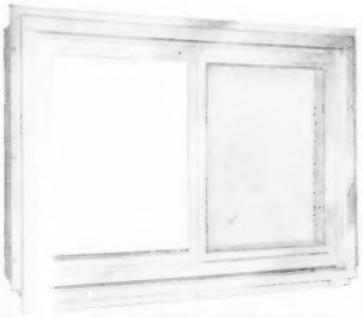
Rusco Horizontal Slide Prime Windows ideally meet design and construction requirements for high window placement, such as in ranch type houses, wherever added usable wall space is desired, and in hard-to-reach places such as over sinks, bathtubs, etc. They assure greater ease of operation at shoulder-high or head levels.

Rusco Prime Windows Are Fully Pre-Assembled
Factory-Painted, Hardware Attached—
All Ready to Install in Window Opening!

GLASS • SCREEN
BUILT-IN WEATHERSTRIPPING
INSULATING SASH (Optional)
WOOD OR METAL CASING
...OR STEEL FINS

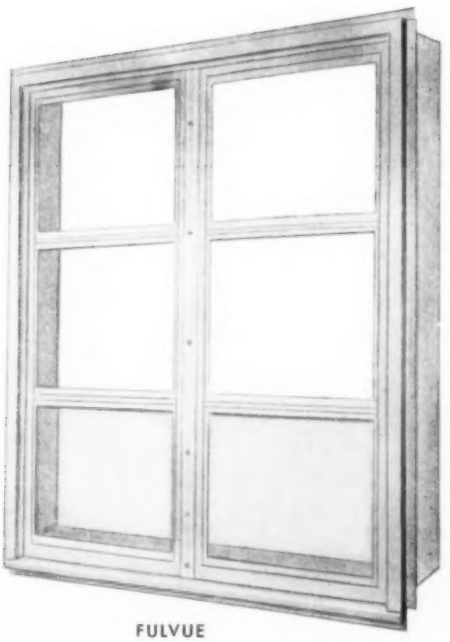
all in one unit!

Sliding Glass and Screen Inserts easily removed from inside for convenience in cleaning. The Rusco removable sash feature has tremendous appeal as a convenience and safety feature.



HORIZONTAL SLIDE

VERTICAL SLIDE



FULVUE

RUSCO Galvanized Steel PRIME WINDOWS

FOR COMPLETE SPECIFICATIONS AND ILLUSTRATED CATALOG, WRITE

Department 7-AR63 THE F. C. RUSSELL COMPANY • Cleveland 1, Ohio • In Canada: Toronto 13, Ontario

Before

YOUR NEXT FRAMING JOB...
MEASURE THE SAVINGS POSSIBLE WITH

Penmetal 1869 Lightsteel
STRUCTURAL SECTIONS

LOWER INITIAL COSTS	Penmetal *Lightsteel* is strip steel, formed into strong structural sections on high speed cold-rolling and punching machines. The cold-rolling process keeps production costs down.
LOWER MAINTENANCE COSTS	Penmetal *Lightsteel* framing is permanent—provides structural stability, complete protection against warping, split, shrinkage, rot and termites.
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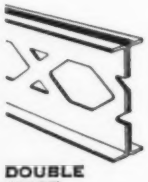

DOUBLE JOIST
6" and 8"
16 and 14 gauge

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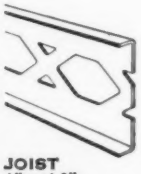

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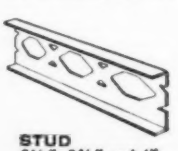

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PENN METAL COMPANY, INC.
205 EAST 42nd STREET • NEW YORK 17, NEW YORK

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Rusco Horizontal Slide Prime Windows ideally meet design and construction requirements for high window placement, such as in ranch type houses, wherever added usable wall space is desired, and in hard-to-reach places such as over sinks, bathtubs, etc. They assure greater ease of operation at shoulder-high or head levels.

Rusco Prime Windows Are Fully Pre-Assembled
Factory-Painted, Hardware Attached —
All Ready to Install in Window Opening!

GLASS • SCREEN
BUILT-IN WEATHERSTRIPPING
INSULATING SASH (Optional)
WOOD OR METAL CASING
...OR STEEL FINS

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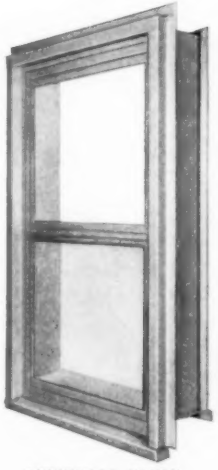
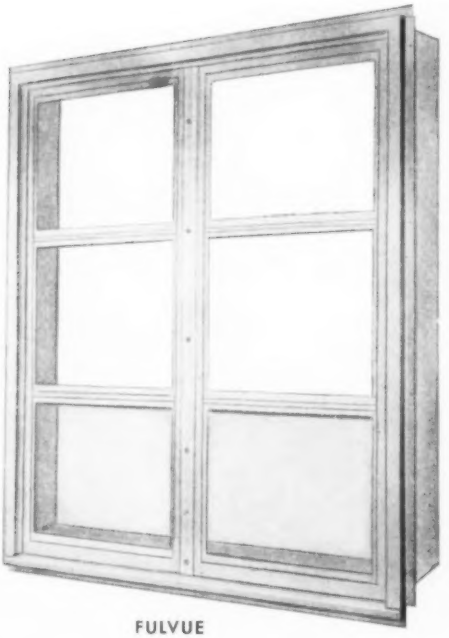
HORIZONTAL SLIDE



VERTICAL SLIDE



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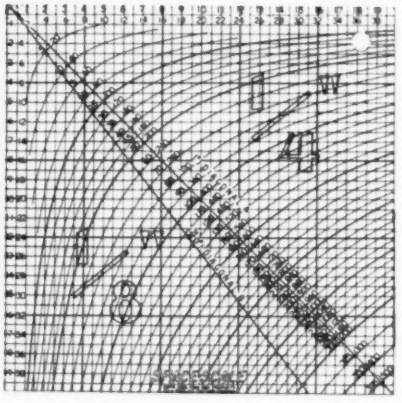
Company.....
Address.....
City..... Zone..... State.....

PRODUCTS

(*Continued from page 222*)

Combination Scale-Slide Rule

Made of 5 by 5-in. transparent plastic with black and red figures for measuring either ¼- or ⅛-in. scale, the *Space-Scale* was designed as a labor saving device for architects, engineers and all others in



Plastic template measures rectangles and circles on ¼- and ⅛-in. scale

the building field. The scale measures areas from scale drawings at a glance and has no moving parts. It is operated by placing the template over the drawing of space to be measured and then reading the figure found on the curve. The scale measures circles as well as rectangular figures. Areas at scales other than ¼ or ⅛ are obtained by multiplying or dividing by certain figures which are given in the enclosed directions. New Era Products, 6 Peter Cooper Rd., New York 10, N. Y.

Iron-Framed Furniture

Included in the third edition of the Sol-Air line, designed by Swanson Associates, is an attractive contemporary desk. Supported on wrought iron legs, the desk has a top and sides of natural ash. A pleasant contrast is found in the two drawers, which may be obtained with a black or rust painted finish. A convenient open shelf is located in the center, directly between the drawers. The desk is 46 by 24 by 28 in. Ficks Reed Co., 424 Findlay, Cincinnati, Ohio.

(*Continued on page 228*)

Simpson
ACOUSTICAL CONTRACTORS

ALABAMA
Badham Insulation Co., Inc., Birmingham
Stokes Interiors, Inc., Mobile
ARIZONA
Fiberglas Engineering & Supply Co., Phoenix
Hall Insulation & Tile Co., Tucson
ARKANSAS
National Builders' Supply, Inc., Little Rock
CALIFORNIA
Coast Insulating Products, Los Angeles and San Diego
Cramer Company, San Francisco and Fresno
COLORADO
Construction Specialties Co., Denver
CONNECTICUT
W. T. Roberts Construction Co., East Hartford
DISTRICT OF COLUMBIA
Kane Acoustical Co., Washington
GEORGIA
Dumas and Searl, Inc., Atlanta
ILLINOIS
General Acoustics Co., Chicago
INDIANA
The Baldus Co., Inc., Fort Wayne
E. F. Marburger & Son, Inc., Indianapolis
IOWA
Kelley Asbestos Products Co., Sioux City
KANSAS
Kelley Asbestos Products Co., Wichita
KENTUCKY
Atlas Plaster & Supply Co., Louisville
MARYLAND
Lloyd E. Mitchell, Inc., Baltimore
MASSACHUSETTS
W. T. Roberts Construction Co., Cambridge
MINNESOTA
Dale Tile Company, Minneapolis
MISSISSIPPI
Stokes Interiors, Inc., Jackson
MISSOURI
Kelley Asbestos Products Co., Kansas City
Hamilton Company, Inc., St. Louis
NEBRASKA
Kelley Asbestos Products Co., Omaha
NEW JERSEY
Kane Acoustical Co., Fairview
NEW MEXICO
Fiberglas Engineering & Supply Co., Albuquerque
NEW YORK
Robert J. Harder, Inc., Lynbrook, L. I.
Kane Acoustical Co., Inc., New York
Davis-Fetch & Co., Inc., Buffalo, Rochester and Jamestown
Davis Acoustical Corp., Albany
NORTH CAROLINA
Bost Building Equipment Co., Charlotte
OKLAHOMA
Harold C. Parker & Co., Inc., Oklahoma City
Kelley Asbestos Products Co., Tulsa
OHIO
The Mid-West Acoustical & Supply Co., Cleveland, Akron, Columbus, Dayton, Springfield and Toledo
OREGON
Acoustics Northwest, Inc., Portland
R. L. Elfstrom Co., Salem
PENNSYLVANIA
General Interiors Corporation, Pittsburgh
Jones Sound Conditioning, Inc., Ardmore
TENNESSEE
John Beretta Tile Co., Inc., Knoxville
John A. Denie's Sons Co., Memphis
The Workman Co., Inc., Nashville
TEXAS
Blue Diamond Company, Dallas
Otis Massey Co., Ltd., Houston
Builder's Service Co., Fort Worth
UTAH
Utah Pioneer Corporation, Salt Lake City
VIRGINIA
Manson-Smith Co., Inc., Richmond
WASHINGTON
Elliott Bay Lumber Co., Seattle
WISCONSIN
Building Service, Inc., Milwaukee
CANADA
Albion Lumber & Millwork Co., Ltd., Vancouver, B. C.
Hancock Lumber Limited, Edmonton, Alberta

Simpson FISSURED TILE

A MINERAL ACOUSTICAL MATERIAL

...for really efficient noise control
...for rich beauty and natural texture
...for incombustibility and long life
...rely on Simpson Fissured Tile

An acoustically efficient, incombustible material of outstanding natural beauty

This fissured tile, newly developed by Simpson Research, uses a special type of rock that is melted and re-formed into highly-absorbent rock wool. A natural formation of fissures, different on every tile, provides a beautiful ceiling texture. It has a soft white finish for maximum light reflection, and comes with either square or beveled edges in 11/16" and 13/16" thicknesses. Its sound absorbing efficiency is unexcelled by any like material, and the tile may be repainted without the loss of acoustical effectiveness.

...INSTALLED BY THESE Simpson ACOUSTICAL CONTRACTORS

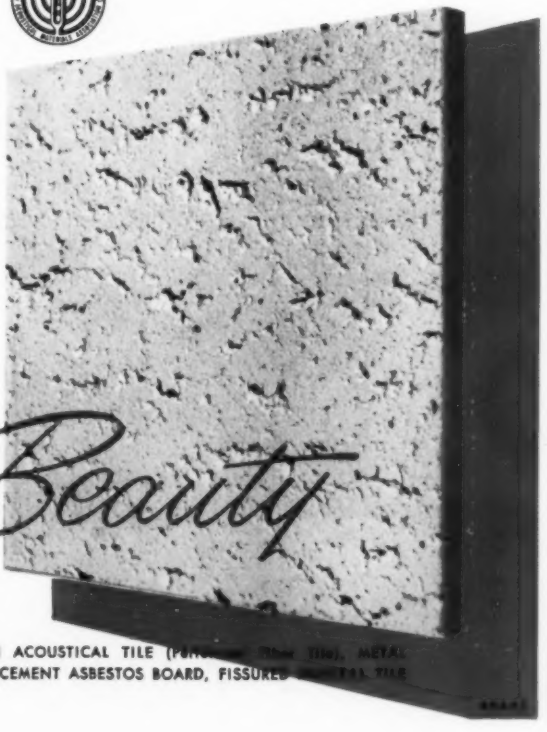
Listed at the left are the acoustical contractors selected by Simpson to install its products . . . perforated fiber tile, fissured mineral tile, metal acoustical units, and other acoustical products.

Already thoroughly experienced, these acoustical engineers are kept abreast of new developments and application techniques at periodic meetings with Simpson acoustical experts. Their extra knowledge and training cost you nothing more.

For samples and estimates, call the Simpson acoustical contractor nearest you. Or, for samples and literature, write

SIMPSON LOGGING CO., STUART BLDG., SEATTLE 1

new...rich...natural *Beauty*



Simpson Acoustical Products include the following: SIMPSON ACOUSTICAL TILE (PERFORATED FIBER TILE), METAL ACOUSTICAL UNITS, PERFORATED HARDBOARD, PERFORATED CEMENT ASBESTOS BOARD, FISSURED MINERAL TILE

PRODUCTS

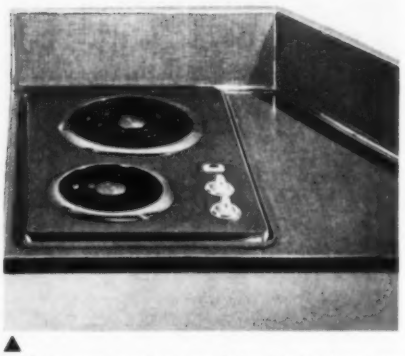
(*Continued from page 226*)

Cooking Equipment

Two California firms have recently added new items to their lines of ranges.

The *Vanishing Grid'l-Shield*, available in the new 5300 series of deluxe ranges, features a folding cover which, when lifted up, reveals a full-size griddle on the top of the range. When in use, the shield protects the stove and areas around the stove from spattering fat. The shields and cover may be easily wiped off with a damp cloth, or removed for a more complete cleansing at the sink. When not in use, the shield folds forward into a chrome or porcelain topped center work surface. Utility Appliance Corp., Los Angeles, Calif.

▲ *Griddle shield protects stove and walls*



▲ *Built-in range designed for limited space*

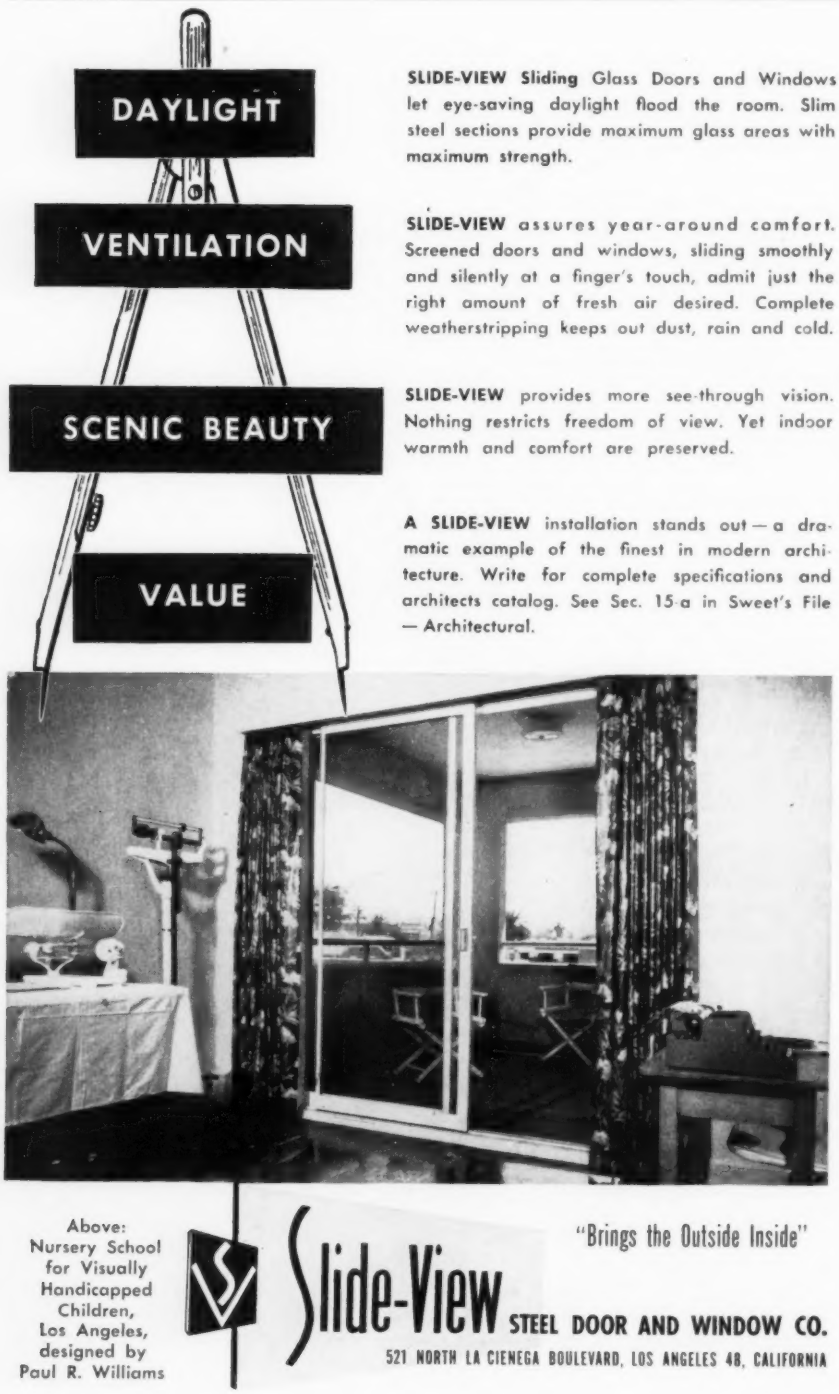
A new cooking top design is a recent addition to the *Thermador* line of "Bilt-In" ranges. Designed for a limited space, two quick-heating cooking units are set in a stainless steel top. The units are controlled by five-heat reciprocal switches. For convenience and safety, a neon indicator light glows when any unit is on. Thermador Electrical Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif.

Upholstering and Decorating With Plastics

Vinylite plastics are now being coated and laminated around natural fabrics, hemp fibers, grass, colored yarns and other decorative materials for use in upholstery and various decorative applications. Most of the new designs are available in either rigid or flexible laminates, the latter being particularly suited to draperies. Used for lamp shades, seat covers, table tops, etc., the material is durable and easily cleaned.

Unique designs result from fillers of Japanese leaves, random patterns of metallic gold thread, pastel dyed ostrich plumes and other objects, and a great variety of materials is made possible by varying the thickness, translucence or color of the outer layers of the laminates. Easily fabricated, the materials can be cut by hand with shears, sewed, stapled, cemented, vacuum formed, embossed and welded electronically. Polyplastex United, Inc., 441 Madison Ave., New York 22, N. Y.

(*Continued on page 232*)



SLIDE-VIEW Sliding Glass Doors and Windows let eye-saving daylight flood the room. Slim steel sections provide maximum glass areas with maximum strength.

SLIDE-VIEW assures year-around comfort. Screened doors and windows, sliding smoothly and silently at a finger's touch, admit just the right amount of fresh air desired. Complete weatherstripping keeps out dust, rain and cold.

SLIDE-VIEW provides more see-through vision. Nothing restricts freedom of view. Yet indoor warmth and comfort are preserved.

A SLIDE-VIEW installation stands out — a dramatic example of the finest in modern architecture. Write for complete specifications and architects catalog. See Sec. 15-a in Sweet's File — Architectural.

Above: Nursery School for Visually Handicapped Children, Los Angeles, designed by Paul R. Williams

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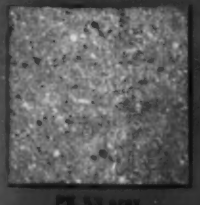
PK 51 ivory



PK 53 gray

PK 60 black

TEN GLORIOUS COLORS TO CHOOSE FROM

REAL TERRAZZO BEAUTY
IN RESILIENT FLOOR TILE

The multi-color brilliance of HAKO POLY-KROME a resilient terrazzo type tile supplies brand new beauty and sparkle for many floor colors. The vari-colored chips in each POLY-KROME tile lend themselves perfectly to practically any commercial and residential room decorative scheme. POLY-KROME is inexpensive, easy to install, on or below grade, effortless to keep bright as new, and its inherent toughness gives extremely high wear resistance for years and years.

POLY-KROME is genuinely new . . . and different! It is modern, gay, and beautiful with long-range economy.

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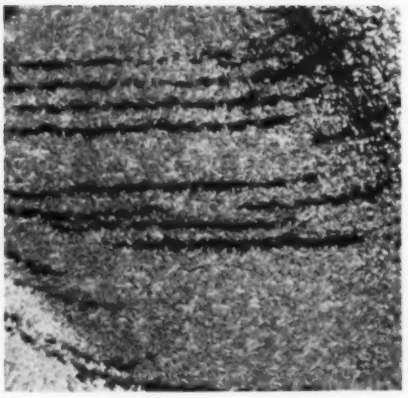
PRODUCTS
(*Continued from page 228*)

Floor Coverings

A new carpet design, inspired by the coronation of the Queen of England, has recently been introduced to the market. Fashioned with striking free-formed blocks, *Coronia* has deep embossing and a high-low pile contrast. The carpet is made with tone on tone colors, or in a combination of two colors.



"Strata," at left, combines nylon and wool for greater resiliency and strength. "Coronia," above, has high-low pile contrast, was inspired by the Coronation

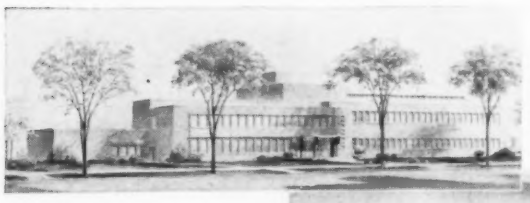
Another carpet introduced by the same manufacturer is the new *Strata*, a shagtone chenille-with-nylon. Combining nylon with wool and celcos, the carpet is reported to have a longer wearing quality and provide unusual resiliency. The new surface texture is equally suited to traditional or contemporary rooms, and special dying techniques furnish an unlimited choice of colors at no extra charge. Shagtone can be tailored to individual order for special shapes, rugs or wall-to-wall carpeting. Nye-Wait Co., Inc., Auburn, N. Y.

Decorative Lighting Fixtures

Recently introduced to the market was a new line of lighting fixtures, some of which were designed in this country and others of which were imported from Italy. Included in the *Italia Line* are: "Galleria," a hanging fixture of eight crystal lensed bowls, four on either side of a slender oblong body; "Cellini," a five-branch wall bracket with deep white and brass reflectors which can be slanted to throw light wherever needed; the "Lombardia," a floor lamp with a wide sweeping shallow dome and three adjustable reflectors which can be fixed to enlarge or reduce the pool of light; and "Como," a two-light wall bracket with one reflector turning up, another, smaller one throwing light down.

The American line includes a number of multi-lamp ceiling fixtures, which are adaptable to industrial or commercial installation as well as home use. They are finished in satin brass, velvet black and baked white enamel, as well as a variety of decorator colors. Lightcraft Mfg. Corp., 8 E. 36th St., New York 16, N. Y.

(*Continued on page 236*)



New Research Building of Wyandotte Chemicals Corporation, Wyandotte, Michigan.

One of Wyandotte's Laboratories showing Kewaunee Equipment with KemROCK Tops.

● Back of every piece of Kewaunee Equipment is nearly 50 years of constant advance in design, construction and working convenience that has kept pace with the progress of Industries, Hospitals and Educational Institutions.

● And when it comes to Tables, Sinks and other Laboratory pieces requiring "Tops" defiantly resistant to acids, alkalies, solvents, heat and abrasion —KemROCK steps into the picture as one of Kewaunee's "Top" salesmen. For example, back in 1941 Wyandotte Chemicals Corporation first ordered Kewaunee Equipment with these "Toughest of all Tops." Now after 12 years of experience, Wyandotte again specifies "Kewaunee with KemROCK Tops" for their modern Research Building.

● KemROCK is an exclusive Kewaunee product made from natural stone (free from veins and seams)—impregnated and coated with a synthetic resin —then baked. It is jet-black—takes a high polish and adds much beauty as well as amazing extra service to Laboratory pieces.

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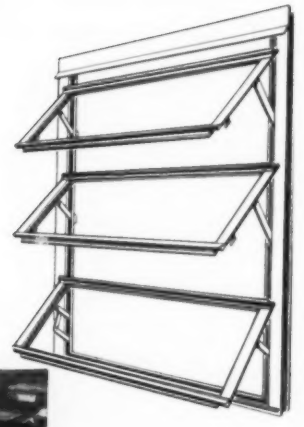
WINDOWS FOR ALL THE WORLD



Big things are happening at Ludman! With architects all over the world specifying more and more Auto-Lok Windows, Ludman has increased production again! Now, in this new plant—**the largest in the world manufacturing awning windows and jalousies**—Ludman is in position to supply all demands!

No other window adds so much to building appearance and utility. Air-tight, draft-free—but with 100% ventilation . . . Auto-Lok windows seal and lock tight—ten times tighter than generally accepted standards. They reduce heating and air-conditioning costs—help heating and air-conditioning equipment to operate more efficiently.

For beauty . . . practical utility, ventilation control, easy operation, trouble-free service and long life—specify Ludman Auto-Lok Windows.

Take advantage of Ludman's Engineering and Planning services. On any job, large or small, Ludman window engineers welcome the opportunity to help you.

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THE WORLD IN WINDOW ENGINEERING

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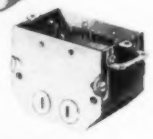
Skilfully designed for fast and easy installation, Appleton products provide top performance in any type of electrical construction or maintenance. For faster completion of better jobs, specify Appleton, THE STANDARD FOR BETTER WIRING.



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PRODUCTS

(*Continued from page 232*)

Conductive Floor Tile for Hospital Operating Rooms

A new electrically conductive vitreous ceramic *Mosaic Floor Tile* has recently been introduced and is especially recommended for use in hospital operating rooms. It is claimed that this tile protects against shock, arc or spark in three ways: 1) it dissipates static electricity, 2) it prevents accumulation of dangerous electrostatic charges, and 3) it provides electrical conductivity between persons and equipment in contact with the floor. Durable and sanitary, the tile is easy to clean with any type detergent. It is made in 1 9/16-in. by 1 9/16-in. by ¼-in. size, straight joint, and is available in a neutral brown. The tile is unglazed, dust-pressed, porcelain type with square edge. The Mosaic Tile Co., Zanesville, Ohio.

Packaged Window Wall Units

The new *Fenestra WindoWall*, available in two sizes, has both fixed and ventilating lights. Sizes are 6 ft 3⅜ in. wide by 6 ft 4⅛ in. high for the 6-light size and 9 ft 4⅛ in. wide by 6 ft 4⅛ in. high for the 9-light size. Ventilated units may be screened with Fenestra All-Metal screens which are installed from the inside and top-hinged for easy access to the ventilator locking handle. Ventilators are reported to be easily operated. The units have a weather-tight closing and maintenance is claimed to be low, due to the steel's being Bonderized and prime-painted at the factory. For insulation purposes, the WindoWall may be glazed with ½-in. insulated glass, or with double strength or plate glass. Detroit Steel Products Co., 3165 Griffin St., Detroit 11, Mich.

Laundry Equipment

A new full-size ironing board which slides out from a recessed cabinet on hardwood glides is currently available. The *Ironette* has no legs to trip over, and it is available in either right or left-hand models. The board is reported to be firmer than the conventional type of

(*Continued on page 240*)

History

THE ONLY COMPLETELY ELEVATOR SYSTEM

for Heavy-Traffic Buildings

- **Eliminates attendants . . . even starters**
- **Adjusts instantly and automatically to any traffic demand . . . no dial settings necessary**
- **Saves up to $7,000 per car a year**

Westinghouse Automatic Traffic Pattern Control is the culmination of years of research. Added to Selectomatic, Synchro-Glide and Operatorless features, it is the finest expression of superlative elevator service available today. Its many special features assure elevator service of uncanny efficiency . . . swift, comfortable, utterly dependable.

Tested and proved in the Michigan Bell Telephone Building in Detroit, this revolutionary new system offers immense cost savings . . . up to $7,000 per car a year. It unerringly responds to all changes in traffic demands during the *entire 24-hour day* . . . instantly and automatically without attendants or any dial settings by starters. Up-peak, down-peak, off-peak, coffee-time, and after-hours traffic is handled more efficiently than with starters, who, if used, are entirely free for information service.

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Karnak®

WATERPROOFING PRODUCTS

Fairless Works of United States Steel Corporation's plant at Morrisville, Pa., on the Delaware River, is the country's largest single steel construction project undertaken at one time. Waterproofing done by Lewis and McDowell, Inc., New York City.

When permanent waterproofing was wanted on the foundation of U. S. Steel's new "Fairless Works," Karnak was chosen by the contractor. This is the largest individually financed industrial project in the world and called for the best in all materials. That's why 750,000 yards of Karnak were used to protect against water, wherever there was a hydrostatic head.

Why Karnak? Because it has the Membrane System of waterproofing *that holds secure* against hydrostatic head or any water condition.

The secret to the extreme water resistance is the Karnak Membrane Fabric. Open Mesh Cloth, specially woven of long, fiber cotton is carefully saturated with highly refined asphalt so as to leave the mesh open. When this fabric is layered on the job with alternate moppings of liquid asphalt, it provides a tough, thoroughly waterproof membrane that resists cracks, abrasion and settling to maintain water resistance through the life of the structure.

The non-sticking fabric unrolls easily...to the very end. It "works" faster and with no waste. It saves labor costs on the job.

The Karnak system is also the best for roof patching, skylight flashing, window and door flashing, through-wall and cornice flashing, as well as waterproofing against a hydrostatic head in dams, swimming pools, viaducts and tunnels.

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Karnak fabric is packed in a sturdy corrugated carton for protected shipping and storage. It keeps the fabric in perfect condition until used...cuts fabric loss.

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PRODUCTS

(*Continued from page 236*)

ironing board, according to tests. The cabinet enclosure has ample space for storage beneath the board, and the standard size counter may be finished to match other kitchen units. Included in the cabinet is a convenient electric outlet plug. Other new laundry aids in the group include a laundry cart and a retractable aluminum clothes rack, both encased in hardwood cabinets in a natural wood finish, white, or any of six colors. The Kitchen Maid Corp., Andrews, Ind.

Full sized ironing board slides out horizontally from recessed storage cabinet. Available in right or left-hand models

Sewing Machine Encased in Kitchen Cabinet

With so much activity centering in the kitchen, an Ohio firm has devised a sewing machine which is encased in a wooden cabinet, designed as a companion piece to the rest of the kitchen equipment. Convenient for mending rips or tears before laundering, without going to another part of the house, the *Domestic Sewmachine* is equally at home in the utility room. When the cabinet is opened, the machine table pulls forward, leaving an extra table top suitable for other chores. Adequate storage space is provided in the two top drawers and lower section of the cabinet. The Domestic Sewing Machine Co., 1231 Main Ave., Cleveland, Ohio.

(*Continued on page 244*)

FOR THE *Comfort and Beauty* A NEW HOME DESERVES . . .

NEW TUTTLE & BAILEY Baseboard Heating Panels

* DESIGNED BY WALTER DORWIN TEAGUE

FOR COMFORT, the new T&B Baseboard Heating Panels are engineered for maximum heating efficiency. Cold outside walls and windows — the source of greatest heat loss in any room — are literally blanketed with a layer of warmth. Floors are warmer, too. And constant, gentle circulation of air means even temperature from floor to ceiling, more comfortable rooms.

FOR BEAUTY, the new T&B Baseboard Heating Panels, designed by Walter Dorwin Teague, have the modern styling so essential in preserving the functional beauty of today's home. Installed in place of conventional baseboard, T&B Panels are inconspicuous, save valuable floor space, mean more living in every room.

For detailed information, write for Catalog No. 301

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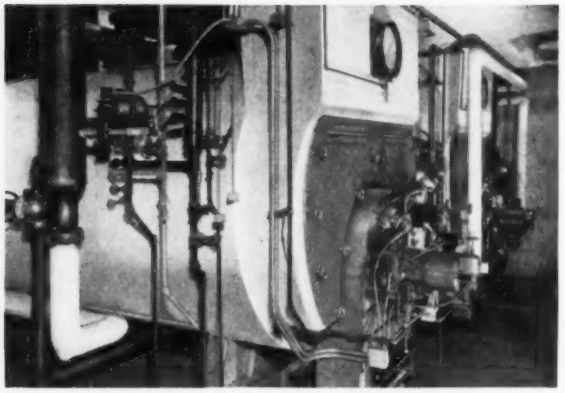
MORE MATERIAL
MORE EXPERIENCE
MAKE THE DIFFERENCE



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Wherever Heat or Power or Industrial Process Steam is required there is a Kewanee Boiler just right for the job. And into every Kewanee goes *more of everything* that adds to a boiler's life and makes it most economical. Owners *expect more* from Kewanee Boilers . . . and they *get more*.

Pictured is a battery of two Kewanee Scotch-type Boilers, for low pressure in the boiler room of the Men's Dormitory, Bradley University . . . a Kewanee series which "stands on its own legs," needing no special setting and requiring comparatively little floor space or head room.

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Peoria, Illinois
GREGG-BRIGGS & FOLEY
Architects
ASSOCIATED ENGINEERS
Construction Engineers
2 Kewanee Scotch Boilers installed by
PEORIA PIPING & EQUIPMENT CORP.

KEWANEE-ROSS CORPORATION
Division of American Radiator & Standard Sanitary Corporation
KEWANEE, ILLINOIS

Serving home and industry
AMERICAN STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS EXCHANGERS

PRODUCTS

(*Continued from page 240*)

Continuous Air Diffusers

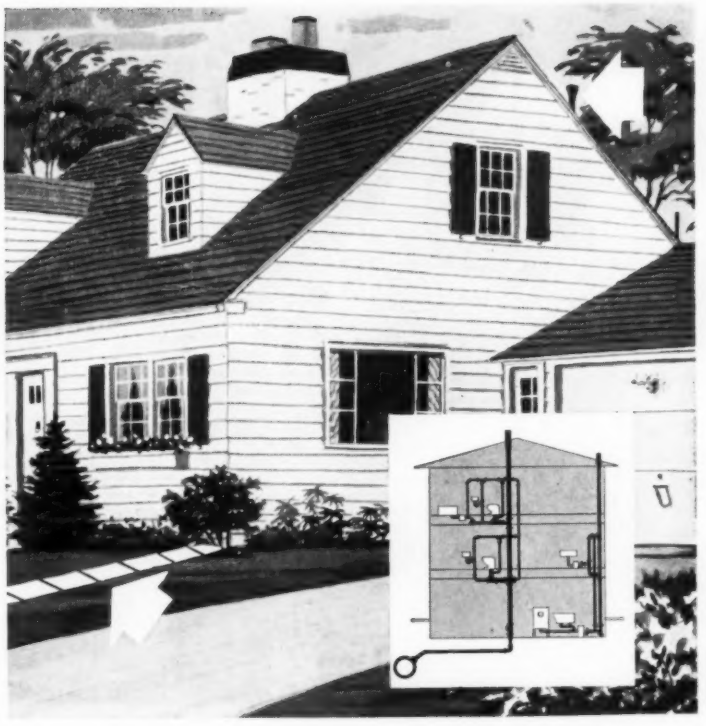
Two new *Agilair Stripline* continuous air diffusers are currently being marketed. Employing a patented "vaned" principle of air distribution, the units have built-in diffusing vanes which are said to produce extremely high turbulence, aspiration and rapid temperature equalization. The diffusers are also reported to insure a continuous blanket of unvaried air over a predetermined area without noticeable air motion, eliminating drafts and hot or cold spots in the zone of occupancy. In addition, the slender strip design of the diffusers makes it possible for the architect to blend the units into a variety of designs. They can be made part of the decorative treatment, if desired, or can be hidden in shallow lighting coves. They can also be combined with unit or continuous rectangular lighting fixtures. Air Devices, Inc., 17 E. 42nd St., New York 17, N. Y.

Space-Saving Kitchen Appliances

Primarily designed for today's smaller kitchens — and also to provide additional storage areas for kitchen equipment — the *Spacemaker* range is made in two sizes, 24 in. and 36 in. wide. The Spacemaker-24 allows the use of an additional base cabinet in the same space occupied by a standard-size range. Thus, the consumer has the benefit of the same number of surface units and 10 per cent more usable shelf space in the oven. This is in addition to her own choice of extra storage and work space, in the form of a cabinet located by the range. The new ranges have been designed on the same modular standard as kitchen cabinets, permitting alignment of a variety of matched wall cabinets for maximum flexibility in kitchen planning. Equipped with push-button controls for the surface units and an automatic oven control, the ranges are reported to be comparatively low in cost. General Electric Co., Major Appliance Div., 310 W. Liberty St., Louisville 2, Ky.

The Case for CAST IRON

ONLY MATERIAL Permitted from street to roof -IN ALL CODES



There's no need to buy more than one kind of pipe for the plumbing drainage system of a home or commercial building. You can specify and install **Cast Iron Soil Pipe** in the whole plumbing drainage system indoors and out, and be sure the job will conform to any code in the country. High structural strength gives cast iron permanence in walls, under cellar floors, above-ground and underground. People don't drive nails through it. Cast iron doesn't crush, warp, absorb water, disintegrate, swell or buckle.

Only **Cast Iron Soil Pipe** has joints packed with oakum and sealed with expanded lead. These joints are impervious to moisture and elastic enough to stand strains and stresses without cracking. That means permanent tightness, permanent proof against root invasion.

To help you in demonstrating the advantages of **Cast Iron Soil Pipe** the Institute has produced an 18-minute sound movie, "Permanent Investment". This picture is available to you for showing before any interested professional or consumer group.

For helpful information for you or your clients, just use the coupon.

Only Cast Iron Soil Pipe gives you ALL these advantages

Rugged Metallic Strength

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Zero Moisture Absorption

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Permanent tightness of joints, with flexibility

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- ☐ Information on your new sound movie "Permanent Investment"
- ☐ Copy of consumer folder: "Plumbing Drainage"

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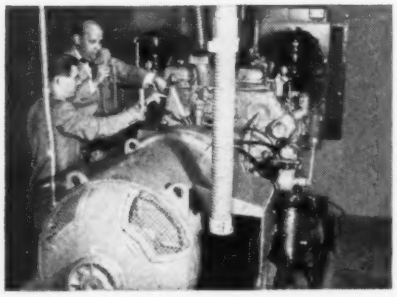
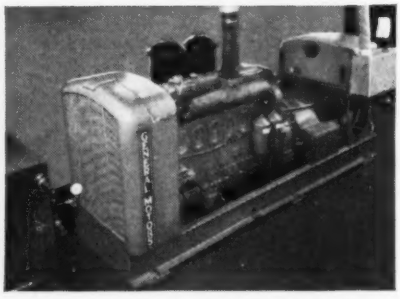
City_____ Zone____ State_____

GM DIESEL *Stand-by* GENERATOR SETS



WJR—Detroit, Michigan, uses 200 kw. GM Diesel generator set as stand-by power for 50,000-watt transmitter. Compactness of unit permitted installation in garage adjoining transmitter building—eliminating cost of a specially designed building.



WKTV—UTICA, N. Y., uses a 100 kw. General Motors Diesel generator set for stand-by power. Set can be started remotely from the control room. Low vibration characteristic of engine permitted installation in room adjacent to transmitter and within 30 feet of studio.

If you are planning stand-by power, be sure to check the advantages of General Motors Diesel generator sets, listed briefly below. GM Diesel generators are meeting the exacting requirements of military service in all parts of the world. They supply emergency power for more than 1100 telephone and telegraph exchanges—for microwave relay stations, for hospitals, government buildings, banks, airports. There is a GM Diesel distributor near you who will analyze your power requirements and make his recommendations without obligation. Look in the yellow pages of your phone book for his listing, or write direct to us.

- Wide range of models—12½ to 200 kw., 220 or 440 volts, single or three-phase current.
- Excellent frequency and voltage regulation for the most exacting requirements.
- Powered by General Motors Diesel engines—dependable, smooth 2-cycle operation—low cost maintenance—easy to service.
- Built by one manufacturer—one warranty, one responsibility for both engine and power generator.
- Instant push-button power starting on safe Diesel fuel—or fully automatic starting. Immediate power, no "warm-up" period.
- Dependable starting—no spark-ignition system to fail because of dampness or corrosion—always ready to start.
- Easy to install—compact—lightweight—requires no special building, no special base. Complete instrumentation provided.
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DETROIT DIESEL ENGINE DIVISION
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SINGLE ENGINES . . . 16 to 275 H.P. MULTIPLE UNITS . . . Up to 840 H.P.

It pays to Standardize on

GM GENERAL MOTORS DIESEL POWER

Write for Generator Set Catalog 6 SA 20.

LITERATURE

(*Continued from page 180*)

Building Exits Code

Building Exits Code (A9.1-1952). New edition of the Code features a provision concerning fire exits in schools, hospitals, hotels, offices and public buildings. It covers not only the exit facilities themselves, but also such contributing factors in fire protection as stairways, corridors, elevators, alarm systems, etc. Copies available at $1.00 each. 136 pp. American Standards Association, 70 E. 45th St., New York, N. Y.

Acoustical Tile

Acoustical Handbook for Architects and Engineers. This book was intended as a practical work manual and presents its factual data in four major sections: Acoustical Tile, Erection Methods and Systems, Sound Isolation, and Maintenance of Acoustical Ceilings. Specifications and detailed drawings are included. 29 pp., illus. Waldvogel Brothers, Inc., 17 E. 42nd St., New York 17, N. Y.

Paints for Decoration

Two pieces of literature on new paint colors and color harmony have been made available.

• The *Redi-Blend Guide to Scientific Color Harmony.* This handy guide is planned around 25 colors, with as many as 10 harmonizing color groups included for each. Using the guide, the reader chooses the color which will be the dominant note in his room, and by following a chart can find combinations of from two or more coordinating color schemes. The guide measures 12½-by 17-in. when opened out, and comes accompanied by a separate folder which includes reproductions of the 25 basic colors. Adelphi Paint & Color Works, Inc., 86-00 Dumont Ave., Ozone Park 17, N. Y.

4 Lovely New Super Kem-Tone Colors. Four separate sheets contain the new colors, with smaller samples of harmonizing colors to be used as accents in rugs, draperies, upholstery, etc. The Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland 1, Ohio.*

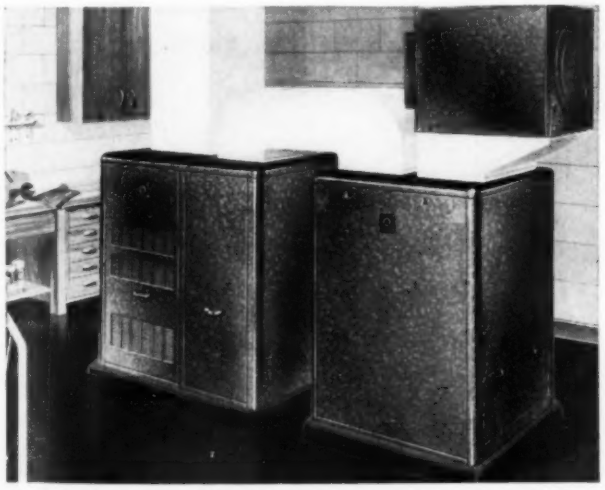
(*Continued on page 250*)

PRODUCT NEWS from AMERICAN-Standard

A review of products in the news and important features worth remembering

REMOTAIRE ROOM CONDITIONER. This remote type unit for multi-room installations heats in winter, cools in summer, filters and circulates the air all year 'round! Individually controlled units use chilled or heated water supplied through a simple piping system from a central water chiller and heating plant . . . no unwieldy ductwork needed.

EMPIRE GAS BOILER. A compact, good-looking and efficient boiler that's available in models for hot water or steam, for basement or first floor installations. Burns any type of gas. Features include pintype cast iron sections which absorb maximum heat . . . precision controls to guard safety and fuel consumption . . . heavy insulation to prevent heat loss . . . colorful, streamlined jacket.



YEAR 'ROUND AIR CONDITIONING. The Mayfair summer air conditioner shown at the right above uses the ductwork of winter air conditioning system . . . mechanically cools and dehumidifies the air. In the return duct above the Mayfair is the Magne-filter, a dry type electronic air cleaner, which removes smoke, dirt and bacteria by electrostatic action.

CONVERTIBLE KITCHEN CABINETS. American-Standard all-steel cabinets are the *only* kitchen cabinets with interchangeable drawers and shelves. This feature affords wide flexibility in kitchen planning. Homeowners can, at any time, create deluxe kitchens to fit their particular needs just by adding extra shelves and drawers.

AMERICAN-Standard

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☐ Remotaire Room Conditioner ☐ Empire Boiler
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take their "cue" from Mother Nature!
RIVERBANK
Sound Insulating Doors
America's finest doorway closure for reducing noise penetration — insuring room privacy. Send for new FREE brochure describing RIVERBANK doors in "easy-to-understand" non-technical language.
Like any healthy, sturdy trees, HARDWOOD flush Doors get their strength and durability from their solid cores. Such construction makes them ideal for most any building but particularly desirable for installations where hard knocks, abuse and heavy traffic are everyday routine as in hotels, schools, hospitals, institutions and office buildings. You'll experience no "holing-thru" from kicks and bumps with these doors because their face veneers, even when thin-skinned, are backed up with solid strength. In addition, they improve room acoustics by reducing sound transmission by approximately 30 decibels. For everlasting endurance and beauty, specify HARDWOOD DOORS. They reduce maintenance costs to nil — refinish to look like new, when desired. Write for details or consult ARCHITECTURAL FILE 16c/HA.
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Offices in
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BOSTON
CHICAGO
HARDWOOD PRODUCTS CORPORATION • NEENAH, WISCONSIN

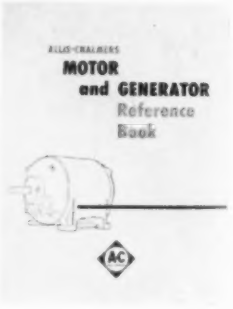
Architectural Engineering

LITERATURE

(*Continued from page 246*)

Lighting

Young Moderns by Lightolier. Pamphlet includes illustrations and descriptions of ceiling fixtures, floor and table lamps and wall pin-ups. Large drawings of the individual units are supplemented by smaller sketches which show the fixture in actual room settings. Descriptions are followed up by suggestions as to various uses of the units. 8 pp., illus. Lightolier, Inc., 11 E. 36th St., New York, N. Y.*



Motors and Generators

Allis-Chalmers Motor and Generator Reference Book 51R7933. Reprinted from the 1952 edition of the complete Electrical Reference Book published by the Electrical Modernization Bureau and edited by E. S. Lincoln, this 50 page booklet is intended to serve as an outline of information which will assist in the selection of motive power for most industrial applications. Various kinds of motors are described and illustrated, characteristics and special features of the different types are discussed, and tables of data relevant to construction and operation are included. 50 pp., illus. Allis-Chalmers Mfg. Co., 1184 S. 70th St., Milwaukee, Wis.

(*Continued on page 254*)

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1 A Complete Line
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3 Known for Distinction

For Any School Door Requirement

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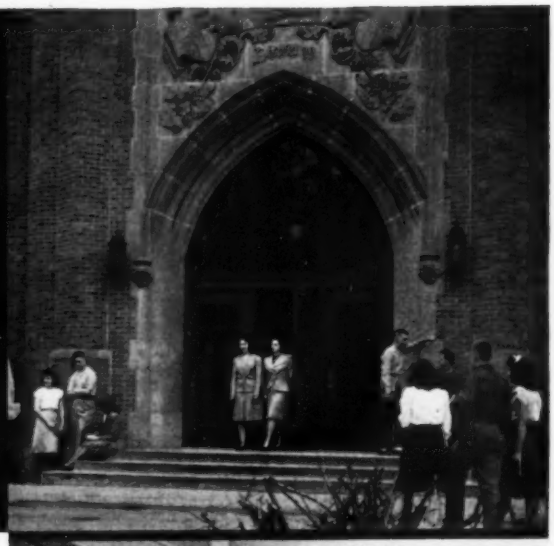
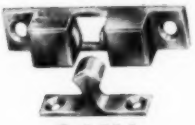
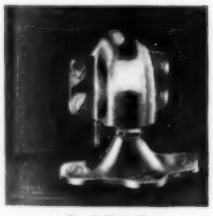


- √ Entrance
- √ Vestibule
- √ Classroom
- √ Stairwell
- √ Gymnasium
- √ Closet
- √ Office
- √ Transoms

G-J 400
Concealed Transom Adjuster



G-J 21A
4-Way Catch



G-J F-40
Door Holder and Bumper

G-J FB-13
Dome Type Door Bumper

G-J WB-5
Wall Type Flush Bumper

G-J F-20
Door Holder and Bumper

G-J F-9
Door Holder and Bumper

G-J No. 4
Hercules Door Holder

G-J 100
Concealed Overhead Door Holder

G-J 90
Surface Type Overhead Door Holder

G-J 80
Overhead Door Holder and Shock Absorber

G-J 70
Overhead Door Holder and Shock Absorber

G-J 500
Concealed Overhead Door Stay and Shock Absorber

For detailed description and applications of these devices, refer to our general catalog.

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- *6′8″ Standard Heights*

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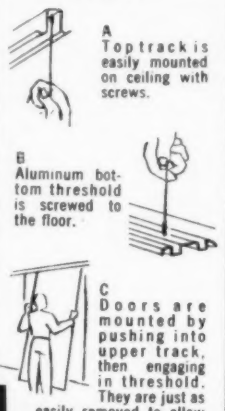


A Top track is easily mounted on ceiling with screws.

B Aluminum bottom threshold is screwed to the floor.

C Doors are mounted by pushing into upper track, then engaging in threshold. They are just as easily removed to allow storage of trunks and other large articles.

SEE SWEETS' CATALOG —File 25c WO for complete details and specifications.

LITERATURE

(*Continued from page 250*)

Upholstered Furniture

Dux, Imported From Sweden. Catalog features several of the pieces exhibited in the Good Design show at the Museum of Modern Art this year in addition to the rest of the manufacturer's upholstered line and related tables. Designed by Folke Ohlsson, this furniture is intended to blend with contemporary as well as traditional styles; all exposed wood is beech and all cushions are foam rubber. Catalog or any individual photos shown in it are available to firms who request on their letterheads. 10 pp., illus. Dux Company, 25 Taylor St., San Francisco 2, Calif.

Heating, Ventilating, Air Conditioning

Heating, Ventilating and Air Conditioning Guide, 1953 Edition. The new 1953 edition of this well-known annual, the 31st edition published, totals 1560 pages and includes several important changes and additions. The Technical Data Section has been increased by 32 pages to a total of 1096 pages, making it the largest it has been to date. The Manufacturers' Catalogue Data Section has been enlarged to 432 pages. Features of the volume include a new section on snow melting, a new chapter on water vapor and condensation in building construction, completely rewritten chapters on electric heating and industrial exhaust systems, and new information on industrial oil and gas burners, short chimneys, industrial degree-days, warm air system design and unit heaters. 1560 pp., illus. Price $7.50. American Society of Heating and Ventilating Engineers, 62 Worth St., New York 13, N. Y.

(*Continued on page 258*)

BRIGGS *Beautyware*

Every Briggs Beautyware fixture is precision-engineered for outstanding performance!

Imagination, experience and skill are the tools of the architect. Fine building products are the materials which make those tools most effective. And there are no finer bathroom fixtures than Briggs Beautyware.

Briggs Beautyware plumbing fixtures are designed and built by experts—men who know how to make plumbing ware outstanding in appearance and performance. Styled to blend harmoniously with any interior decorating scheme, Briggs Beautyware always makes a hit with the folks who are going to use it. And—of equal importance—it's just as popular with the men who install it.

Plumbers and builders know that Briggs Beautyware can't be beat for simple, easy installation. They know they'll save time and money by taking advantage of installation shortcuts Briggs engineers have devised.

You can virtually forget client complaints, too, if you specify Briggs Beautyware. Briggs fixtures are precision-engineered to provide positive, trouble-free performance. Acid-resistant and easy to clean, they require a minimum of maintenance.

Specify Briggs Beautyware. You'll please builder, plumber and home owner. And you'll know you've chosen the finest.

© 1953

BRIGGS BRASS FITTINGS are precision-engineered, too. Durable construction and attractive, modern appearance make these sparkling, tarnish-proof chromium plated fittings a vital part of every Briggs Beautyware installation.

BRIGGS MANUFACTURING COMPANY · 3001 MILLER AVENUE · DETROIT 11, MICHIGAN

Burt

WALL LOUVERS

ARE NECESSARY EQUIPMENT WITH ALL GRAVITY OR FAN VENTILATORS . . . . . .

Burt Wall Louvers are essential equipment to replace the air exhausted by ventilators. And their design blends harmoniously with modern building lines. Burt's complete Wall Louver line includes all types — from economical general purpose models to industrial types — fixed and adjustable designs. Burt experience and equipment also provide every facility to construct special units economically when required. Removable screens, louver operators, etc., are all available at Burt.

Send for CATALOG

See Sweet's or write for Bulletin SPV-17

FAN & GRAVITY VENTILATORS • LOUVERS • SHEET METAL SPECIALTIES

The Burt Manufacturing Company

48 East South Street • Akron 11, Ohio

LITERATURE

(*Continued from page 254*)

Automatic Door Operators

Electric Doorman. Catalog gives specifications, drawings, photographs and descriptions of electric operators for opening and closing metal sliding doors that are counter-weighted and equipped with fusible links. Information on all types of controls available from the manufacturer is also given. 28 pp., illus. Electric Power Door Company, 2127 E. Lake St., Minneapolis 7, Minn.

Electrical Dehumidifier

Halsey Taylor Air-O-Dryer. Bulletin introduces an electrical dehumidifying unit now available from the manufacturer. Brief specifications and capacity tables are given, along with suggestions for most effective areas of installation. A photograph of the unit and features which make for reliable service are also included. 2 pp., illus. Halsey W. Taylor Co., Warren, Ohio.*

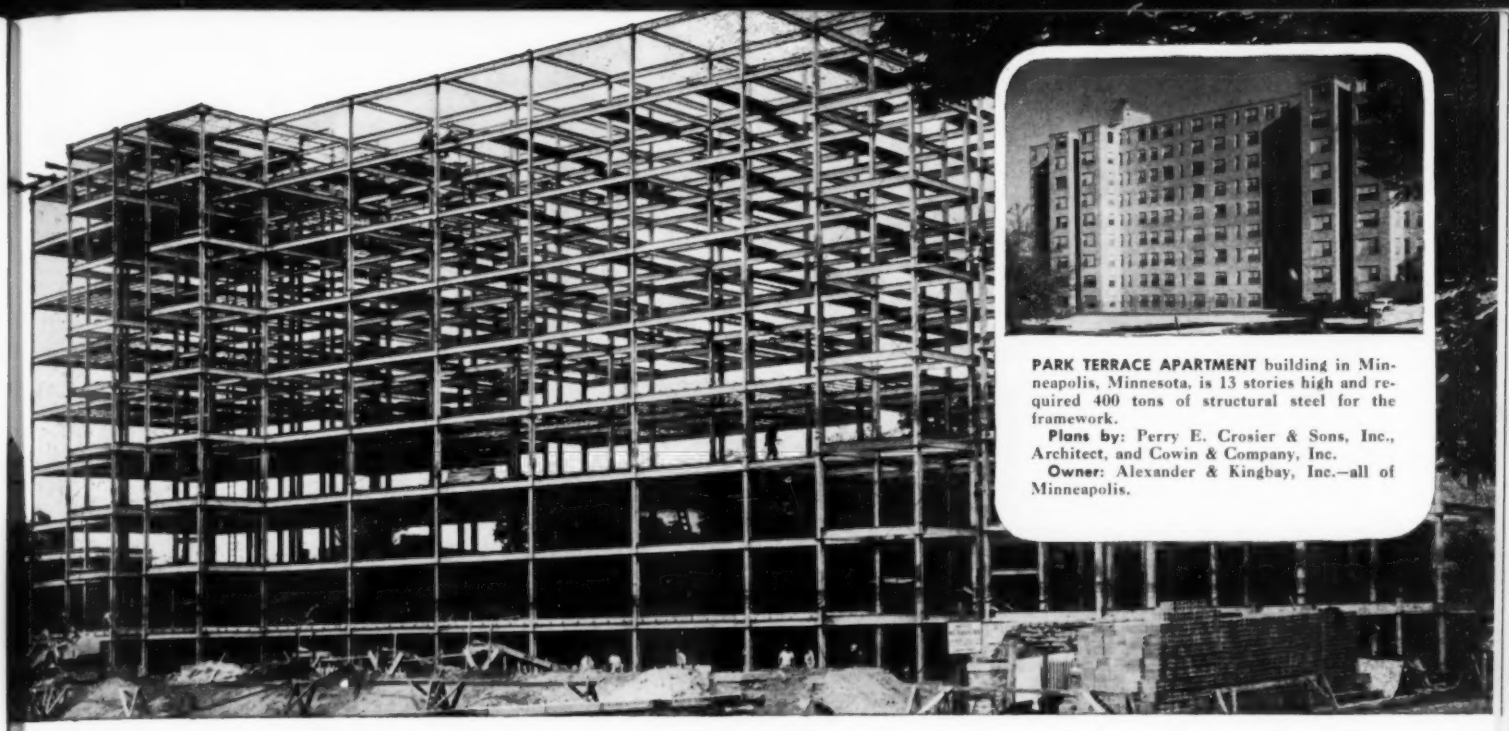
Guide to Furniture with Laminated Plastic Tops

Buyers Guide to Formica Topped Furniture. This attractive booklet pictures each piece of furniture included and gives its price, color and manufacturer as well as serial number. Tables, desks, dinette sets and several types of cabinets are included. 93 pp., illus. The Formica Co., 4614 Spring Grove, Cincinnati 32, Ohio.*

Portable and Built-In Fans

Hunter Fans — 1953. Pamphlet presents in text and illustration the manufacturer's new 1953 line of fans for various purposes. Includes attic fans with automatic or manual shutter, several types of window fans, standing floor fans, portable oscillating fans, exhaust fans and air circulator floor fans. The booklet includes many photographs and drawings of the different models. Specifications and dimensions are also included. 12 pp., illus. Hunter Fan and Ventilating Co., 400 S. Front St., Memphis, Tenn.

(*Continued on page 262*)



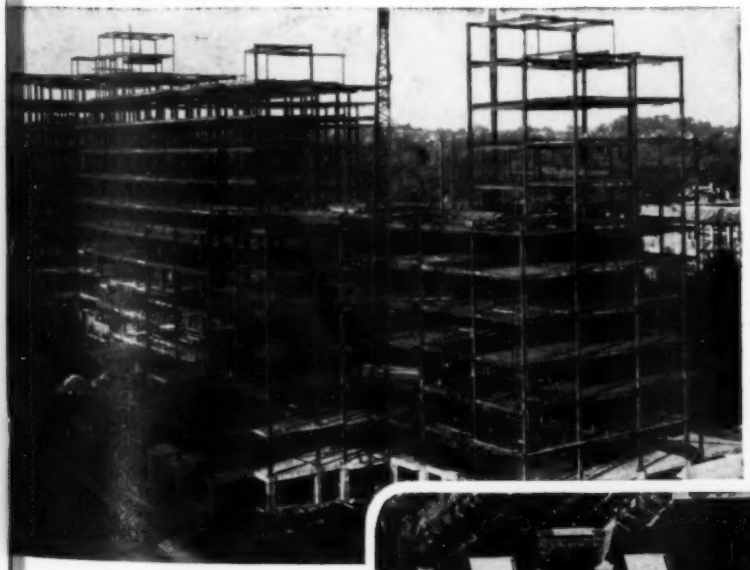
PARK TERRACE APARTMENT building in Minneapolis, Minnesota, is 13 stories high and required 400 tons of structural steel for the framework.

Plans by: Perry E. Crosier & Sons, Inc., Architect, and Cowin & Company, Inc.

Owner: Alexander & Kingbay, Inc.—all of Minneapolis.

Whether the specifications call for BOLTED, RIVETED or WELDED construction

...it's a job for *AMERICAN BRIDGE*



THE MARYLANDER, a beautiful new apartment house in metropolitan Baltimore, is a fine example of all-welded construction. This 10-story building, complete with penthouse, required 1700 tons of structural steel framework . . . fabricated and erected by American Bridge.

Architect: Hal A. Miller and Associates, and Candela and Resnick.

General Contractor: Baltimore Contractors, Inc.

THESE two large, modern apartment buildings—one in Baltimore, the other in Minneapolis—are good examples of sound structural steelwork. They also show that American Bridge plays no favorites as to connection methods. Bolts were specified for the Park Terrace Apartment building, and welded construction was called for on the Marylander.

Just as one type bridge is not best for every location, no single method of steel construction can be claimed the best for every type of tier building.

Your architect or consulting engineer can be relied upon to specify the type of construction best suited to your project. American Bridge has the experience, the equipment and the technically trained personnel to handle all types of construction with economy and dispatch—any time—anywhere.

Our nearest contracting office will be glad to discuss your proposed building so that you may have the benefit of our experience on all types of field connections.

Interesting movie now available for free showing under your sponsorship

For showing in churches, schools, clubs and industries, the new sound and color motion picture—BUILDING FOR THE NATIONS—a candid, factual photographic record of the highlights of the fabrication and erection of the United Nations Secretariat Building in New York. For bookings, write Pittsburgh office.

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DOUBLE, DOUBLE HUNG
Aluminum Windows

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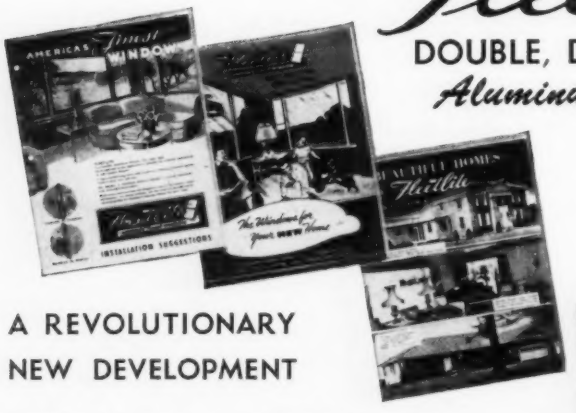

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NEW DEVELOPMENT

FLEETLITE is a revolutionary new window—a complete year-around unit combining interior and exterior double hung windows and screen in a 4-channel extruded aluminum frame! Its advanced design makes FLEETLITE a practical, handsome unit that every architect working on home plans will want to investigate.

Architects everywhere appreciate the amazing freedom of design offered by FLEETLITE double hung windows—and the matching picture windows—in any size or shape.

The tight construction of these fabulous windows, together with the double window feature, saves fuel costs, keeps out dust and heat in warm weather. Smaller, less expensive air conditioners may be used.

Hundreds of thousands of FLEETLITE Windows have been installed in new homes throughout the U. S. and Canada. Home owners are delighted with the beauty and everlasting construction of FLEETLITE windows. It is so easy to raise the lightweight sash for ventilating the house, so easy to remove them for cleaning.

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FACTORY REPRESENTATIVES

Fleetlite
AMERICA'S finest WINDOW

As advertised in House Beautiful, House and Garden, Small Homes Guide, American Builder, Practical Builder, Magazine of Building, Architectural Record, etc.

Made by . . . FLEET OF AMERICA, INC. • 407 DUN Building, Buffalo 2, New York

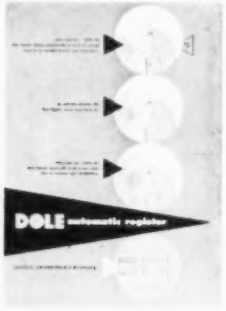
Architectural Engineering

LITERATURE

(*Continued from page 258*)

Automatic Registers

Dole Automatic Register. Brochure illustrates operation, features and advantages of the manufacturer's register for automatic individual room temperature control with any forced warm air heating system. Typical applications are shown and details of the built-in thermostatic device which controls the register are included. 4 pp., illus. The Dole Valve Co., 1933 Carroll Ave., Chicago 12, Ill.



Wall Louvers

Burt Wall Louvers; Industrial, Commercial, Institutional. Catalog describes and illustrates the manufacturer's complete line of wall louvers. General purpose louvers, industrial louvers, screens, operators, fixed and adjustable styles are shown in photographs and details. Construction features are outlined, tables of dimensional and constructional data are furnished, and information on specification and installation is included. 8 pp., illus. The Burt Mfg. Co., Akron 11, Ohio.*

(*Continued on page 264*)

CRANE'S COMPARTMENT BATHROOM

A prize-winning room plan from Crane's national architectural competition

1ST PRIZE BATHROOM

First prize winner, *bathrooms for homes costing up to $25,000, in Crane's national architectural competition—designed by J. A. Curtis, graduate student, Massachusetts Institute of Technology.*

Here's one of the many new ideas that came out of Crane's national architectural competition.

We call it *Crane's Compartment Bathroom.*

By careful planning, the designer has provided the efficiency and privacy of two bathrooms at little more than the cost or space of one . . . a room that as many as four members of the family can use at the same time.

See how privacy is obtained. A sliding door shuts off the Crane Drexel water closet. A draw-curtain does the same for the Crane Neuvogue tub in the bath and dressing area. And instead of the usual single lavatory, there are twin Crane Marcia lavatories installed in a trim counter-top with cabinets.

The Compartment Bath is typical of the many new practical room ideas available from Crane. Each room is described in an "Idea Folder" which also includes suggestions for decorating and furnishing. Together with the Crane Sketchbook of Ideas, these folders help your clients visualize and approve new room arrangements. Ask your Crane Branch or Crane Wholesaler.

CRANE CO.

GENERAL OFFICES: 836 SOUTH MICHIGAN AVE., CHICAGO 5

VALVES • FITTINGS • PIPE

PLUMBING AND HEATING

Architect: Wyatt C. Hedrick, Dallas, Texas

Four Longview school buildings used approximately 400,000 fbm of Minalith-treated lumber for roof decks, ceiling joists, wood framing around openings.

How Longview, Texas, PROTECTS Its School Children and Its Tax Dollar Investment

When the citizens of Longview, Texas decided their community needed four new school buildings, they demanded absolute structural safety plus practical economy of design and construction. They also wanted long serviceability with minimum maintenance.

Wyatt C. Hedrick, well-known Dallas architect suggested a popular and economical method of construction—brick veneer supported by fire-retardant chemical-impregnated lumber.

Hedrick specified that lumber be pressure impregnated with Minalith.* Listed by Underwriters' Laboratories, Minalith also meets Federal Specifications for Fire Retardants. Wood treated with Minalith will not support combustion—it will char slowly where flame touches it, but will not ignite. During a fire, Minalith-treated lumber maintains its load bearing strength without sudden collapse. As a plus-value, Minalith protects wood from decay organisms and insect attack. And Minalith has no undesirable effects on lumber, keeps it clean for handling and completely paintable.

With Minalith-treated lumber readily available, local labor was able to proceed at once. Longview was pleased to note that use of local labor and local materials kept construction tax dollars at home.

Minalith-treated lumber is a product of American Lumber and Treating Company, who also produce Wolmanized* preservative-treated lumber. There are Wolman preservative treatment plants in all parts of the country. For further information write:

American Lumber & Treating Company

General Offices: 1601 McCormick Building, Chicago 4, Illinois

Offices: Little Rock, Arkansas • Portland, Oregon • Boston • Los Angeles San Francisco • Baltimore • New York • Jacksonville, Florida • Seattle

Producers of the Original

MINALITH *FLAME PROOFED LUMBER* a companion product to **Wolmanized** PRESSURE TREATED *Lumber*

* Reg. U. S. Pat. Off.

LITERATURE

(*Continued from page 262*)

Vinyl Plastic Sheeting Material

Facts About Kalistron. Leaflet tells the complete story of this material—what it is; how it is made; in what dimensions, colors and patterns it is available; how it is applied, etc. Photographs of actual applications on both furniture and walls are given, along with a chart of physical characteristics. A separate specification form is also included. 7 pp., illus. Kalistron, Inc., div. of U. S. Plywood Corp., 55 W. 44th St., New York 18, N. Y.

Swimming Pool Construction

Swimming Pool Construction Portfolio. This portfolio is an unusually complete compilation of technical information available to the architect or builder of swimming pools, containing catalogs on equipment and price lists as well as engineered typical plans for form-poured, gunite and concrete block pools. A coordinating booklet, "How to build a swimming pool" (Bulletin B-1), deals with most general problems connected with this type of design, and treats those individual facets that would come up naturally in the course of the job. In addition, the manufacturer will furnish photographs of swimming pools on request from architects or builders. 8 pp., 8 pp., 8 pp., 5 plans, illus. Landon, Incorporated, 5920 Sepulveda Blvd., Van Nuys, Calif.*

LITERATURE REQUESTED

The following individuals and firms request manufacturers' literature:

Robert J. Bratton, Jr., Construction Estimator, Bryant & Detwiler Co., 1166 Woodland, Inkster, Mich.

Thomas A. Kapczynski, Architectural Designer, 32 Kendall Blvd., Oaklyn 6, N. J.

Norman Klehamer, Student, 1608 Alder St., Eugene, Ore.

Allan F. May, Architect, Hesson & May, Architects, 148 Olmos Dr., W., San Antonio, Tex.

Corner units are PYREX brand Lenslites. Available round and square in wide-angle and concentrating patterns for controlling incandescent lights. Exceptionally resistant to heat. Intermediate units are Alba-Lite Pattern No. 66. Available flat or curved in three patterns, smooth, fluted and pebbled. Lengths 48", 24", 12".

Photo: Courtesy Grand Rapids Store Equipment Co.

Installation: The Fair—Evergreen, Evergreen Park, Illinois

Architect: Holabird, Root & Burgee

Lighting Design: Mr. I. Robert Palm, Professional Engineer for The Fair Department Stores

Fixture Manufacturer: Solar Light Manufacturing Co.

Electrical Contractor: Emerson-Comstock Company, Inc.

The *right* lightingware puts *appeal* in apparel

Architects and builders of the Fair-Evergreen, Evergreen Park, Ill., faced two problems common to department stores the world over:

1. How to make the store inviting to customers?
2. How to show merchandise at its sales-appealing best?

The photo shows how various types of CORNING engineered lighting glassware helped solve these problems in a large area with average room conditions, including taupe carpeting with a 40 to 50% reflection factor. The lighting plan is unobtrusive, but it has design and unity. It consists of 14-foot squares made up of troffers 12″ wide in continuous rows plus corner units 12″ square.

Alba-Lite panels afford comfortable, over-all lighting

Inviting, over-all lighting effects are provided by Alba-Lite Pattern No. 66 bottom panels in the fluorescent troffers. Illumination levels vary between 45 F.C. and 50 F.C. with no dark areas.

Merchandise looks its best because Alba-Lite transmits true color from the light source. Fixture efficiency is high, yet panel brightness is low. Smooth surface of the glass assures easy cleaning. And at no time can it warp, fade or discolor.

Lenslites direct light on columns

Corner units are 12″ square, wide-angle PYREX brand Lenslites. These offset 100-watt incandescent light beams and direct them toward the columns.

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This merely gives you an idea of the modern, efficient light transmission and architectural design flexibility that CORNING engineered lighting glassware can give you. To get the complete story, send for Bulletin LS-32 and the photometric data sheets. Write or mail the coupon for this information.

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CASE OF THE MISPLACED SCUPPER

BY RICHARD M. BENNETT, F. A. I. A.

NINETY-FIVE PER CENT of my friends wrote back they were interested in the idea behind a letter that went something like this:

"Wouldn't you like to read about what *not* to do architecturally — some frank exposing of the bugs in buildings? And hear about the remedies that are so often found only through bitter experience?

"What would you think of a number of us pooling information of failures and semi-failures — details we would never try again, how we would do certain things the next time we get a chance, etc.

"These suggestions could be anonymous — perhaps with just initials — any way each preferred. They could be illustrated with photos, freehand sketches on tracing paper — informal, frank, helpful.

"Such information would be interesting because everyone who has ever done anything has made mistakes, but he isn't really sure that others have. By publishing warnings to others, it will get rid of some of the guilt we can't help feeling; it might be fascinating reading; and it might prevent someone else from repeating our 'Bloomer.'

"So, if you will pass along some 'don't-do-this' or 'do-it-this-way-next-time' items, we will see if we can get them published and perhaps find out if there is enough interest in this approach to the dissemination of architectural information to justify more along the same line."

Not only was the response gratifyingly enthusiastic, but there were some contributions sent in without too much prodding. The first reply started out very frankly:

> ***"Ordinarily, I try not to think too much about the failures in my own buildings, though there have been many. Most of them, it seems, have been errors in judgment rather than detail. For instance, the omission of drain tile around a slightly submerged lower area — which in many buildings I have gotten away with, but in the last one allowed plenty of water to come in. Or a flush wood base which also serves as plaster ground. The first time it worked nicely, but the second time the plasterer just would not work to it, and so it was a failure."***

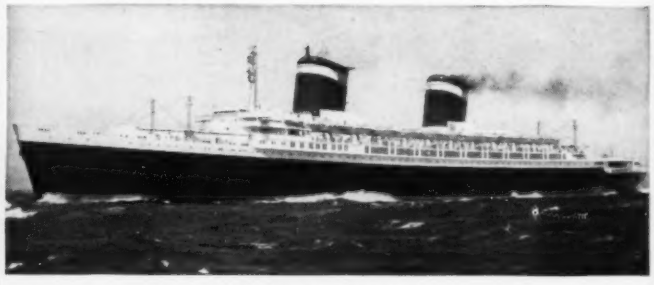
You will note the first item remembered above concerns water, and one of the interesting conclusions to be drawn from our small sample of trouble is that water is a devilish enemy of our profession. Another example of this enemy can be classified under psychological warfare:

> **"The Case of the Strategically Located Scupper.** ***Wrestling with a light budget, we abandoned gutters, leaders and drains on a small-house job, and resorted to scuppers at each end of the shed-type roof. The scuppers worked beautifully, pouring the***

(Continued on page 270)

SOSS HINGES

ADD BEAUTY AND DISTINCTION EVEN TO SHIPS



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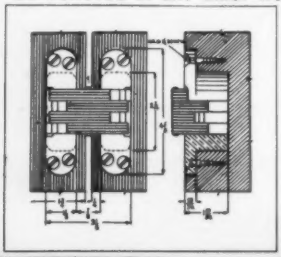

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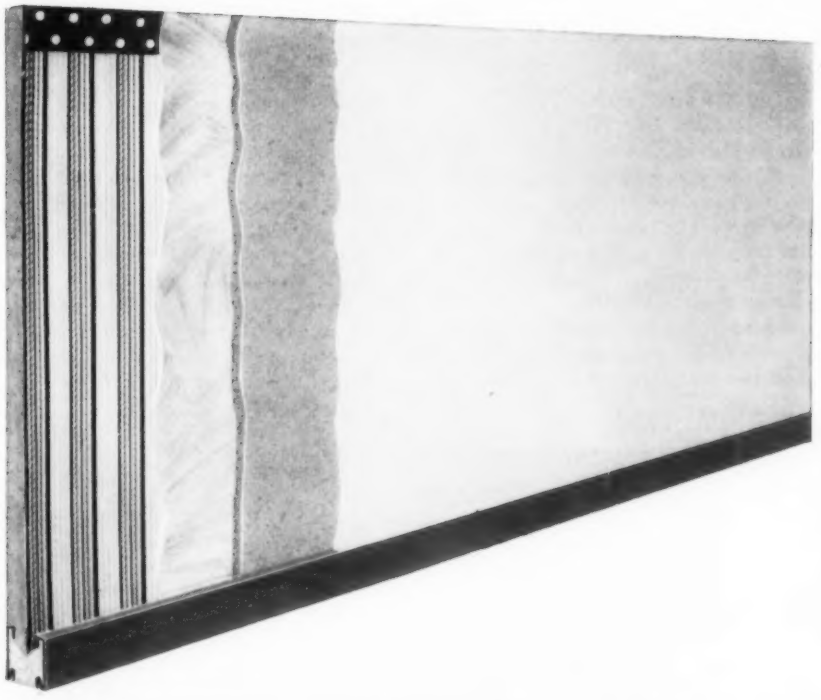

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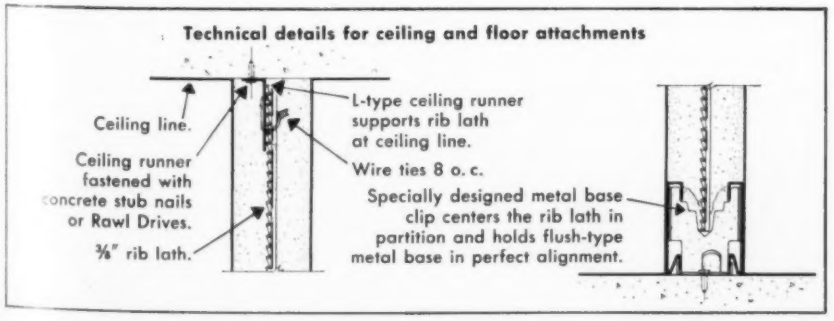
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(Continued from page 268)

water off the roof with a great splash. During the course of construction and prior to the clients' moving in, we witnessed their performance in a driving rain storm. We liked the little touch they added to the design, so did the client, and we all felt proud of our ingenuity. Came moving day — later came the rain. We had completely overlooked the fact that the master bedroom was at one end of the house, with its cross-ventilating window right under one of the scuppers. The power of suggestion is great. The night of the first storm, the compelling splash of the innocent scupper projected images our clients could not resist. The bathroom light was eventually left on for the night. To this day we blush mildly when our oversight comes to mind. And to this day, our clients blush profusely, but refuse to answer, when we ask how they overcame the compulsion of the not-so-strategically located scupper."

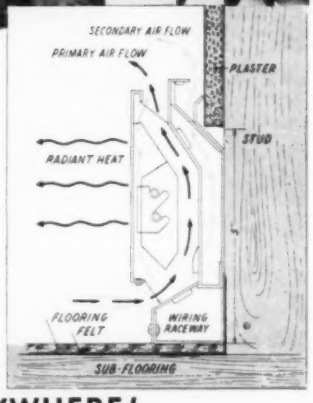
And again, water — even when one is trying to use it for a good purpose on a modern flat roofed house.

"We planned this house to have a dead-level roof to hold water during the hot months; the goal being greater comfort for the clients through the cooling action by evaporation, plus the added insulating qualities of the reflectivity of the water. The roof drains were of the 'beehive' type, fitted with a removable collar, slightly less high than the coping. With the collars in position, the drains didn't drain until the water was about two-in. deep. The coping was about three-in. high. We thought that the one-in. difference was sufficient to prevent any spill over the coping. We were wrong. In the greatest dimension of the house, about 65-ft, there was enough error in level to completely upset our theory. There was a spillover of water at one end, no water at all at the other. After all our planning, we had to abandon the idea for fear that the uneven exposure of the roof would create new problems."

The battle of water continues

"Draftsmen, sheetmetal men and carpenter foremen seem to have a special penchant for in-

(Continued on page 272)



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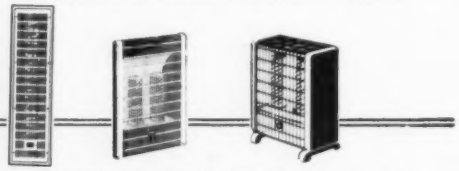

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(*Continued from page 270*)

stalling gutters with the exterior edge higher than the gravel stop or edge of roof. This, along with insufficient attention to expansion, and contraction problems, has meant a good many leaks."

Sometimes it isn't a matter of inundation, but a wistful defeat:

"***Experience teaches us that gravel stops and cornice flashings should be well set out beyond the facia in order to avoid drips and stains.***"

Quite a few replies were concerned with too much trust in manufacturers' claims and wondering how information could be exchanged without violating some sort of libel laws. Not all such troubles are as amusing as this:

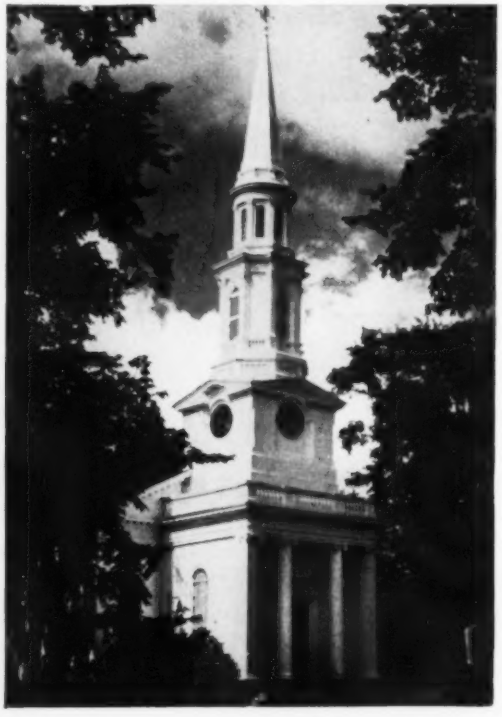
"**Metal Tile.** ***We specified stainless steel wall tile for the bathrooms in a house, the tile to be laid according to manufacturer's directions, etc. Our first inspection of the installation was a shocker. Stainless steel tile has a distinct brushed, or directional, sort of finish, with different light reflective qualities, if not all set with the grain running in one direction. The manufacturer's directions did not cover this point, and we were not familiar enough with the material to know of this peculiarity, and the mechanic just didn't give a damn. If you ever want to create a really giddy wall surface, I recommend stainless steel tile laid in a random pattern. Try it when you design the 'Nut House' in your next amusement park. It's great!***"

Often the manufacturer is not at fault. Something happens to his product after he ships it, and it is this area of action between one trade's responsibility and another's that the architect is found holding some sort of a bag.

"***Steel roof and floor panels and steel exposed wall panels are being promoted because of their ease of installation plus the fact that the floor and ceiling panels have a perforated underplate which serves as the finished ceiling with some acoustical value. These panels all come with some kind of a bonderized shop coat. The architect will recognize this and perhaps specify an additional two-coat job after erection. However, after this product has been lugged around two or three times, then set in place open to the weather and the ceiling surface burnt full of holes for fan and electrical connections, there is practically nothing left of the prime coat. Furthermore, the under surface will have to be buffed and sanded in order to get the welding marks smooth, and will require a considerable amount of preparation before the painter can start it. In addition, it will probably take a good three-coat job to cover. On a fairly good size job of good quality, again the architect may be embarrassed because of additional charges in properly finishing the work.***"

(*Continued on page 274*)

Old North Congregational Church, Ipswich, Mass., erected in 1846, is rare example of wood Gothic. Old North dates back to about 1634.



Churches of Wood

are inspiringly beautiful, traditionally revered, and readily adaptable to the modern community's needs for places of worship, religious education and recreation.

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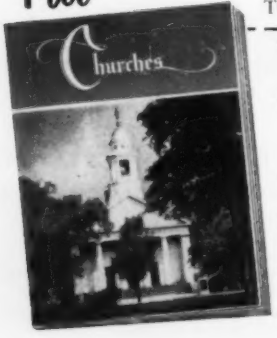

Many outstanding American churches, built of wood, are shown in the 32-page booklet, "Churches". Send TODAY for a FREE copy.

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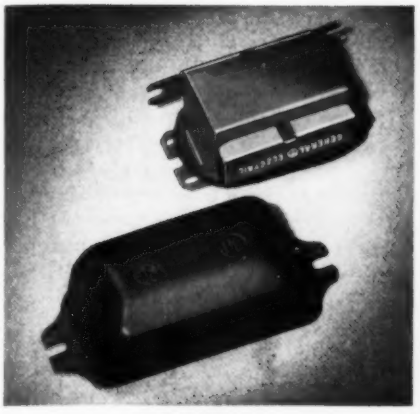

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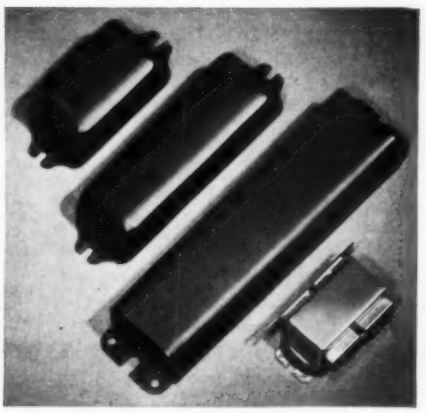

REPLACES 3 . . .

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And for partially open fixtures which must meet "suitability of enclosure" requirements for U.L. listing, you can order G.E.'s clamped core ballast with a metal lock-on cover.

The lock-on cover is a unique feature of G.E.'s clamped core design. It lets you incorporate savings in size, weight and cost into nearly every type of small fluorescent fixture except those which are "open" or "wide open"—that is, where the ballast is directly exposed either to air or to the fixture mounting surface.

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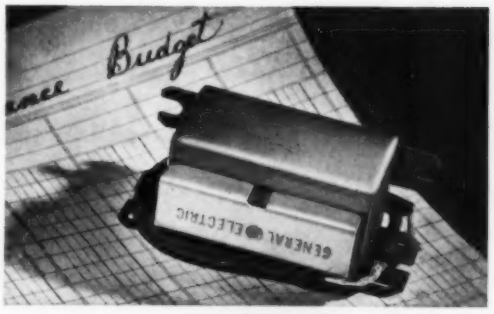

COSTS LESS

MISPLACED SCUPPER

(Continued from page 272)

Another source of extras is found in cases like this:

> *"For school work and for other places of public or semi-public assembly, one of the advancements in design has been the individually room-controlled unit ventilator combining a heating element with ventilation. These unit ventilators come equipped, generally, under an engineer's specification with throw-away filters. They are installed, of course, during the process of construction and, in many cases, used during the construction of the building. By the time the building is swept out and is 'broom clean', the filters are so clogged that no air will transmit. The building is then occupied and rooms are found to be cold. These filters, being the throw-away type, are not cleanable to any degree. There has been, in most every case, no allowance for additional filters, so someone must accept the charge. The alternate is a complete additional set of filters for the entire job, or the installation of so-called permanent filters for each unit — which can be washed, but are not as efficient as the throw-away kind."*

Lest anyone think that new manufactured products have a monopoly on trouble for some architects, there is still a thing or two to watch out for in using natural materials, too.

> *"In wood construction, careful attention to equalizing shrinkage has always been a must. Occasionally, diagonal sheathing on the walls is wont to run through past the floor construction, leaving the floors with a variation of ¾-in. to one-in. from outside wall to center of the house, with consequent cracking and spalling of plaster, wracked door frames and sticking doors."*

Surprising things still happen, and are still being solved:

> *"We often have a specified flooring to be applied diagonally for bracing purposes, and have used a 60-deg angle to shorten the flooring span. This works very well except when the flooring changes direction. The consequent soft spots are something to behold. (½-in. plywood well nailed and glued to the subfloor took care of this particular situation.)"*

Sometimes they can be solved two ways:

> *"We have discovered that sliding wood windows work very well, except where there is no overhang to protect them from the weather. Either continuously complaining clients, or much weatherstripping seems the outcome."*

Of course, the mechanical plant of a building is a constant source of trouble, for example:

> *"In several tall apartment buildings built recently, inside baths and kitchens were made possible by mechanical exhaust systems. Natural infiltration is usually considered adequate air*

(Continued on page 276)

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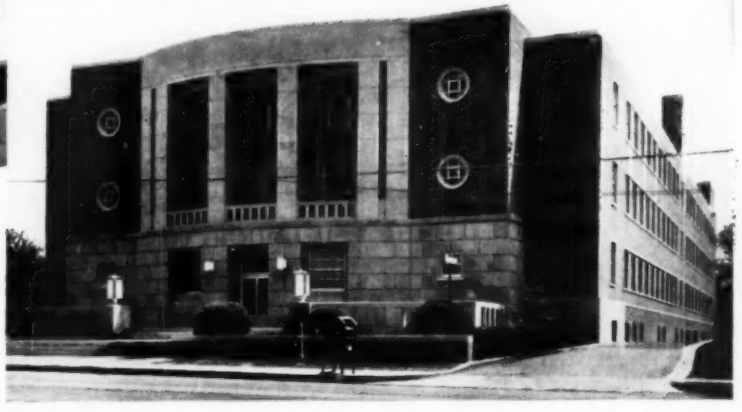
Electrical Contractor — Paul L. Gilmore Co., Columbus, Ohio
General Contractor — Hague M. Boyajohn & Associates, Columbus, Ohio



Architect — William Lynch Murray Associates, Harrisburg, Pa.
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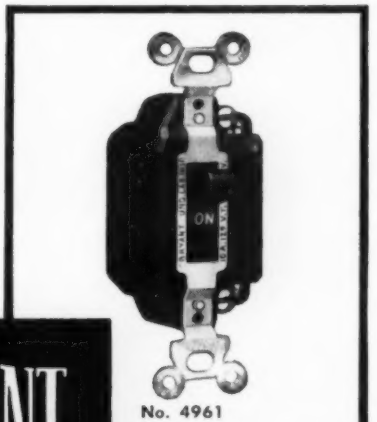

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(Continued from page 274)

supply, but in this building, unit ventilators were installed in corridors to make certain air would enter the apartments to insure cooking odors would not permeate the halls. On the completion of the building, serious difficulty was encountered at the incinerator, when smoke and flame belched out from time to time. It was only after seeking many possible causes, that it was discovered the total exhaust system was creating an actual vacuum in the upper stories. Until then, no one had considered the balance of air in — and out."

Another example of one thing working against another is exemplified in this report:

> "*We recently found a plasterer using an insulating light-weight plaster for a scratch coat for a radiantly heated ceiling. Far from ideal!*"

And the same firm contributes another case that is classic as an example of the principle of how easily horrible things can happen.

> "*Although obvious, we have had one case of cold water lines installed immediately under a radiantly heated slab.*"

This by no means included all the experiences recounted in response to the letter. There are many more to be found. The issue now is whether it is helpful for architects to exchange these inevitable happenings. As a conclusion to the article, there is a very thoughtful piece Professor Walter Bogner set down instead of searching out detailed, clinical-type troubles. Perhaps taking his admonitions to heart is more important than exchanging confessions — certainly they should be helpful:

> "*All the success an architect may have had with the design of a building, with meeting an owner's budget, and with making a contribution toward progress in architecture may be completely lost because some pesky little difficulty arises. In many instances, it may not be due to a mistake of the architect, but nevertheless the client will consider him responsible. A little leak, a cold spot in a room, peeling paint, noisy fans, estimates that come in too high, or a room that turns out too small are just a few examples of the 1,001 irksome annoyances that may plague the architect.*
>
> "'*What I Would Not Do Again*' *to avoid such troubles leads me to analyze the causes for them. I find they grow out of these four factors:*
>
> *1) Insufficient building funds*
> *2) Failure of materials to behave as expected*

(Continued on page 278)

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(Continued from page 276)

3) Human failure in performing work conscientiously
4) Lack of experience or knowledge to deal with new situations

"These factors indicate that it is hard to lay down hard and fast rules on how to make and keep clients happy with the work of architects. To deal specifically with the multitude of bugs that might turn up in that extremely complex process of designing, constructing and administering a project would be an endless task. So, I will only generalize on what I would not do again, by stating the following points based on the factors given above:

"First, I would not try again to answer owner's demands for which adequate funds are lacking, or which may be unreasonable in other ways. This is sometimes hard to do, because these obstacles often do not come to light until after contractual obligations towards clients, and commitments and expenses in the office have already begun to dangle a noose above the architect's head.

"Second, I would not use again new materials or methods until I have had substantial proof that the claims for the performance on which their use has been predicated can be substantiated. The architect is often caught with problems of cracks, condensation, sound transmission, etc., etc., after having been assured by salesmen and literature that such things would not happen. Though he may not be to blame for the consequences of over-optimistic claims, he is nevertheless held responsible by the client for them.

"Third, I would not again allow the construction of a fair-sized project without a competent clerk-of-the-works. Even though the contractor may enjoy a good reputation, his workers are no longer craftsmen who are interested in, or capable of, doing their tasks with such care as to give the architect assurance that all necessary precautions against defects are being taken. The architect in his supervision cannot find out whether every little detail is executed as conscientiously as he had assumed it would be.

"Fourth, I would avoid mistakes that creep in due to inexperienced draftsmen, engineers, or lack of the architect's knowledge of how to deal with new problems. I believe that competent help and advice are prerequisites to the avoidance of 'bugs'.

"In stating these four principles for 'What I Would Not Do Again', I am striving for ideals. There are unavoidable situations arising when with the best of intentions an architect finds himself out on a limb, hoping that his luck will hold out. If it does not, there will be 'bugs' to plague him.

"So to end on another generalization, one can say that knowledge, thoroughness, foresight, and competent help will overcome difficulties — provided that one is not confronted with just plain bad luck."

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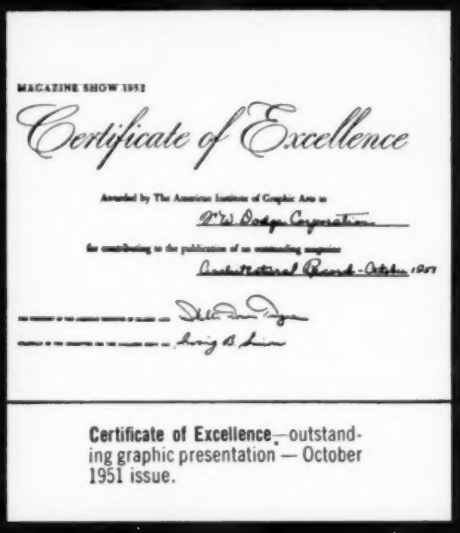
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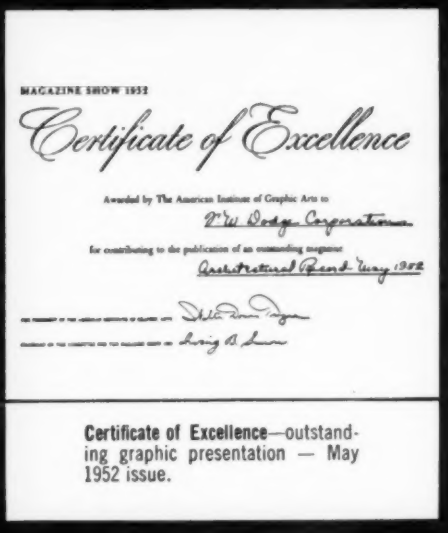
for contributing to the publication of an outstanding magazine
Architectural Record - October 1951

Certificate of Excellence—outstanding graphic presentation — October 1951 issue.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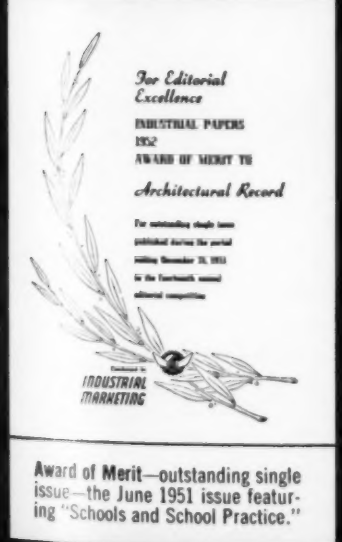
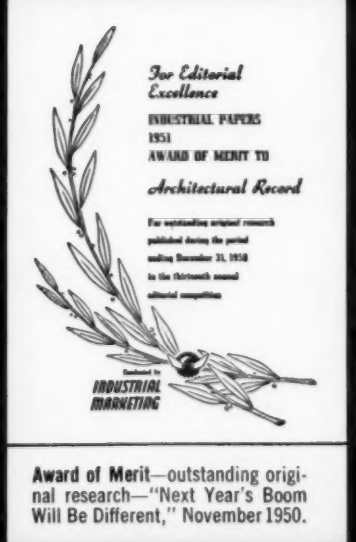


Award of Merit—outstanding single issue—the June 1951 issue featuring "Schools and School Practice."



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*1952: Architectural Record, 2,817 pages; second magazine, 1,834 pages. First quarter 1953: Architectural Record, 720 pages; second magazine, 414 pages. Source: Industrial Marketing.

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LAKE PLACID CLUB GOLF HOUSE

(*Continued from page 170*)

1

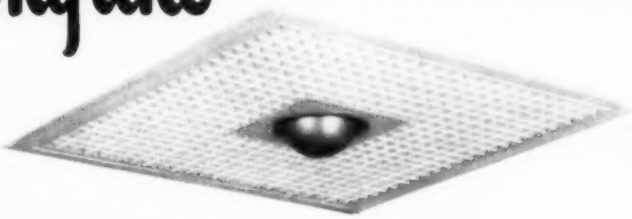
2

3

4

Additional views: 1. Step-down terrace on upper level accommodates large groups who are served from upper level lounge facilities. 2. Teeing-off area on lower level. 3. Main lounge, upper level, with view over upper terrace. 4. Golf office, lower level lobby

Skylike ---------THE INCANDESCENT LIGHTING SYSTEM



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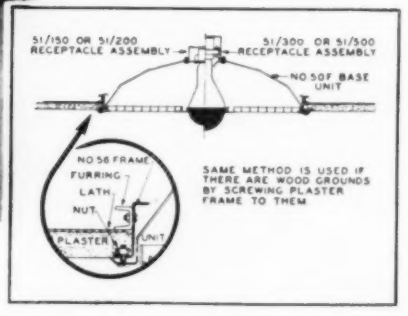
Upper level of the new Carson Pirie Scott & Co. store at Evergreen Park, Illinois. Lighting fixtures are SKYLIKE using 500W silvered-bowl lamps

Cross section showing the simple installation method used for the SKYLIKE units



THE PROBLEM . . .

To provide a general lighting system, dignified in appearance, yet in perfect harmony with both the architectural and decorative scheme of the store. The system had to provide the color quality of filament lamps so important to general merchandising. Ceiling construction was hung wire lath, sprayed with U. S. Gypsum Sabinite. Lighting intensity required was 18 foot candles throughout the store.

THE SOLUTION . . .

Recessed SKYLIKE units using 500W. Silvered-Bowl Lamps were selected. They were centered in 10' x 18' areas and planned for in construction of the ceiling framing. Standard No. 56 plaster frames were installed when ceiling framing was built. Reflectors and louvers were installed after plastering was finished. The completed installation fulfilled all the basic requirements as to cost, quality and quantity of illumination.

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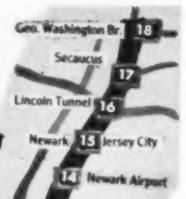

NEW JERSEY TURNPIKE

one of the world's greatest highways

USES WING DRAFT INDUCERS

New Jersey's heavily traveled 118 mile throughway was designed to be modern today—and modern tomorrow. The maintenance buildings, the restaurants, lunch rooms and service stations are low and streamlined. High chimneys would have been costly and would have spoiled the handsome appearance of these structures. Therefore WING Draft Inducers, which eliminate the need for high chimneys, are furnishing the draft requirements of the heating furnaces. A total of 11 WING Draft Inducers are installed in maintenance buildings, lunch rooms, restaurants and service stations. They meet satisfactorily the 24-hour service imposed by the requirements of this great super-highway.

Pictured below is one of the Howard Johnson restaurants spaced at convenient intervals along the Turnpike. No chimney is visible, for WING Draft Inducers supply precise and dependable draft to the furnaces.

Installation pictured at right shows WING Draft Inducer in one of the Turnpike's maintenance buildings. Note elimination of high chimney in photo below.

Bulletin I-52 tells more about "Motorized Draft". Write for a copy.

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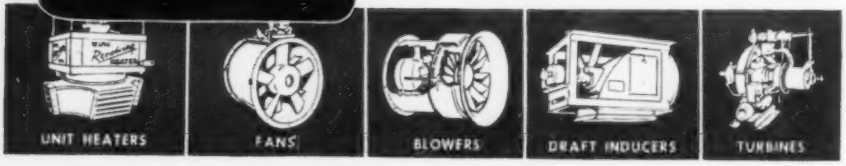


THE RECORD REPORTS

WASHINGTON

(*Continued from page 38*)

four to four and a half per cent. In a concurrent move, Federal Housing Administration said the rates on its insured housing loans would move up from four and a quarter to four and a half per cent. These loans still carry the one half of one per cent service charge, which in effect makes the FHA rate now five per cent. The FHA directive made the new maximum rates applicable "upon request of mortgagee" to applications in process and commitments outstanding. The actions were otherwise not retroactive.

Exempted from the FHA order were military, defense and cooperative housing, on which the four per cent rate is set by law. In the same category is the direct loan program of the VA.

The new FHA Administrator, Guy T. O. Hollyday, summed up the industry reaction succinctly when he said it removed the indecision in the money market and allowed the industry to resume its activities. He pointed out that a quarter of one per cent meant approximately 15 cents per thousand dollars per month in added charges to the buyer. That figured out at $1.50 per month more to be paid on a $10,000 mortgage.

The VA said that on a typical $9000 loan with a 20-year maturity the mortgage payment would be $2.43 more per month.

There was a brief pause in the midst of general industry jubilation over the rate increase when it appeared that an Amendment to the House Independent Offices Appropriation Bill would force the government's secondary mortgage agency, the Federal National Mortgage Association, to sell all of its mortgage holdings in the 12 months following July 1, 1953. Fannie May was rescued from extinction, however, by a last-minute maneuver on the part of Rep. Jesse Wolcott (R-Mich.).

INDUSTRY LEADERS NAMED TO ADVISE ON FHA PLANS

Guy T. O. Hollyday, Baltimore realtor who has succeeded Walter L. Greene as Commissioner of the Federal Housing Administration, has named a

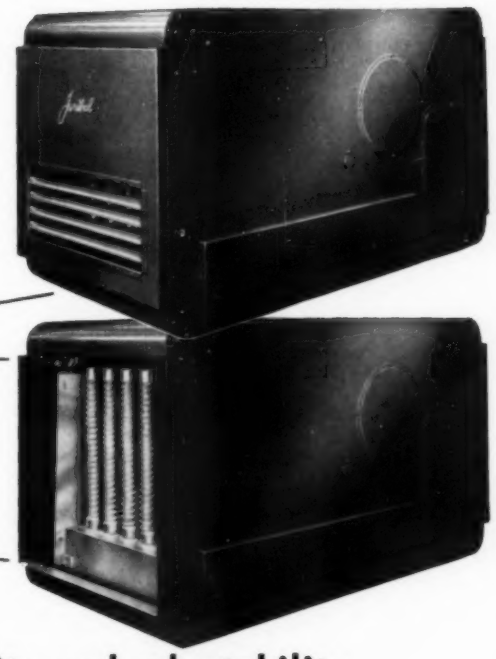
(*Continued on page 290*)

Most Versatile Warm Air Gas Heating Unit Ever Built!

Model FHS

as a unit heater

as a central heating system



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A GAS-FIRED UNIT HEATER

Janitrols' inconspicuous good looks and ultra-quiet operation make it an ideal unit heater for installations in schools, churches, offices, stores, sales rooms, restaurants and similar buildings.

Optional use of filters provide a new degree of cleanliness for unit heater operation. Directional louvers give precise air deflection to deliver warm air where most needed.

Four sizes of Janitrol FHS Units range from 65,000 to 150,000 Btu/hr. AGA rated input. Widths range from 17″ to 22″. Heights range from 23½″ to 24⅝″. Lengths range from 39½″ to 47″.

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Here is the most adaptable and different gas heating unit . . . clean, simple, compact design it establishes a new standard in flexibility and economy . . . saves useful floor space, so important in today's trend to compact house designs. This greater freedom in unit placement results in more economical installations whether for perimeter heating, conventional type layouts or Janitrol Save-Way System with Constant Air Circulation and 4″ duct.

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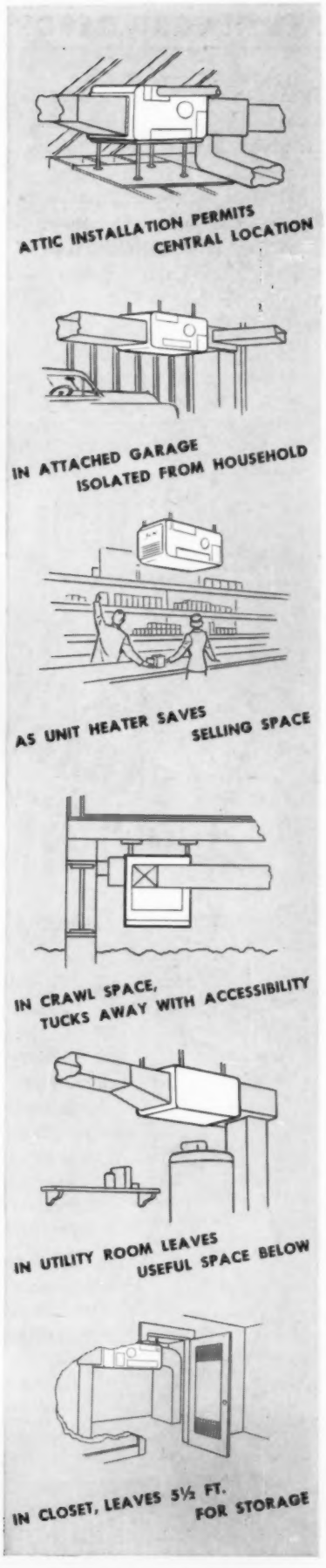
ATTIC INSTALLATION PERMITS CENTRAL LOCATION
IN ATTACHED GARAGE ISOLATED FROM HOUSEHOLD
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six-man committee of leaders in the home building and home financing fields to advise him on FHA policy and program.

Members of the committee: James Rouse, Baltimore, chairman; Fritz Burns and H. J. Mendon, both of Los Angeles; E. A. Camp Jr., Birmingham, Ala.; Walter Gehrke, Detroit; and Philip M. Klutznick, Park Forest, Ill.

WASHINGTON (*Cont. from p. 286*)

WILSON ACCEPTS CONCEPT OF BROAD DEFENSE BASE

Secretary of Defense Charles Wilson last month told appropriations leaders in Congress his proposed budget would retain the concept of a broad mobilization base of production as insurance against a full emergency. He added that high-cost or unsound producers would be eliminated from the program.

Mr. Wilson also said a $500 million item for "reserve tools and facilities" had been kept in the budget. The item, considered by the previous Administration essential for maintaining the "broad base," had been reported to be threatened with elimination or severe reduction.

Mr. Wilson's testimony appeared to settle the controversy which had been stirred up in recent months by the remarks of various Administration speakers which led to speculation that Mr. Wilson was pushing for "narrowing the base" — concentrating defense production in a few big plants for reasons of economy. Advocates of the "broad base" philosophy inherited from the Truman Administration pointed out that its adoption had been predicated on security, not economy, considerations, and that the whole concept of dispersion as an element of defense was tied up with it.

A-BLAST TESTS INCLUDE SERIES ON WALL SECTIONS

The Spring series of atomic blast tests on the proving grounds near Las Vegas, Nev., has included some highly involved experimentation with various types of wall structures; but it may be months before detailed analyses of findings are announced.

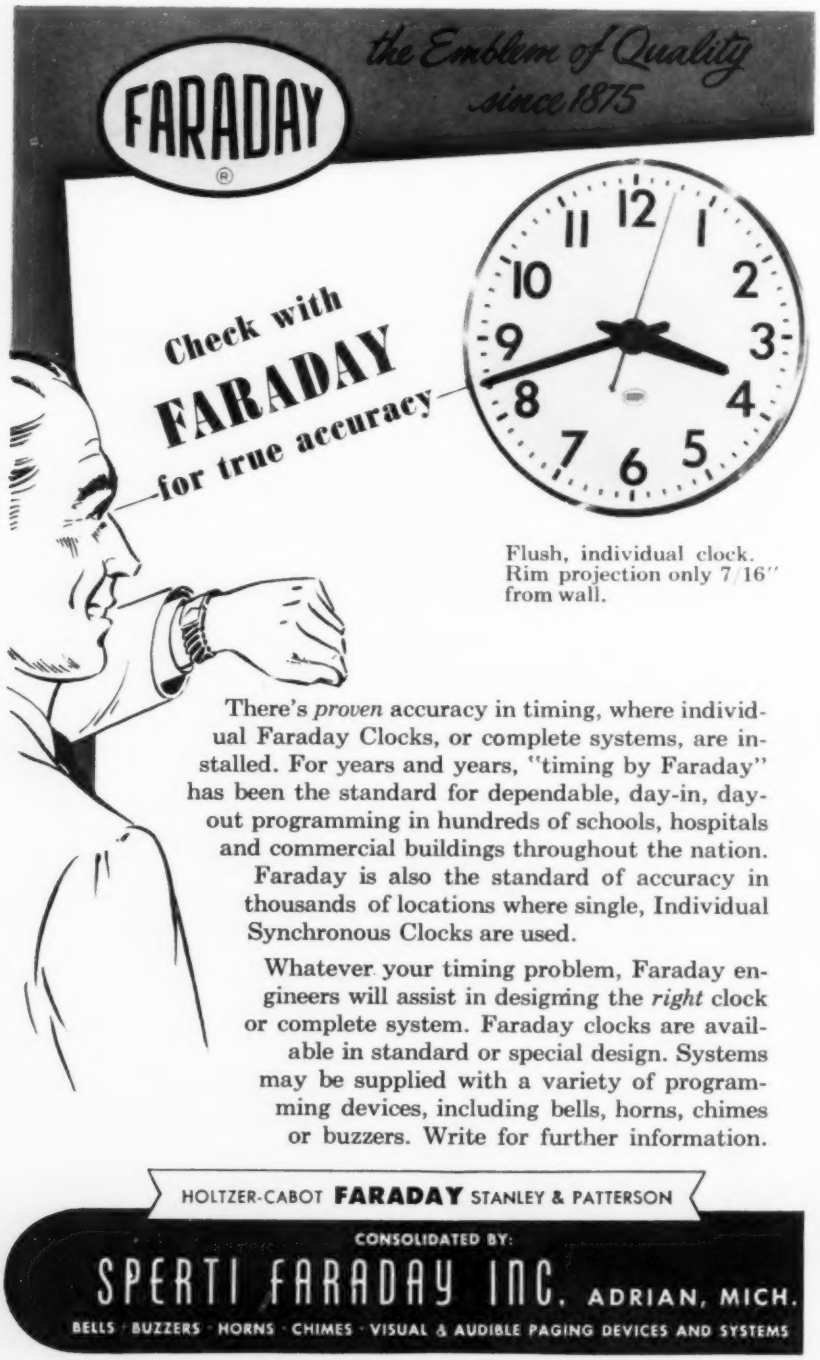
The military and the Atomic Energy Commission clamped a tight secrecy classification on the wall tests. It was learned, however, that several types of curtain walls were subjected to A-blast pressures — cinder block, cement block, brick and metal paneling assemblies were included. Both curtain walls and partition structure samples were erected for the tests. No wood design was included except as it might be incorporated in partitions.

The series, first real test of building components undertaken by the AEC, was "highly instrumented," one of the factors which will delay completion of analysis. Another is the fact that the same team of civil defense researchers worked on the wall tests as conducted the earlier work on housing units and individual shelters — thereby postponing analysis of the housing results and thus analysis of wall test results.

Notes on the News

• The Administration's program for opening the atomic field to private

(*Continued on page 294*)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There's *proven* accuracy in timing, where individual Faraday Clocks, or complete systems, are installed. For years and years, "timing by Faraday" has been the standard for dependable, day-in, day-out programming in hundreds of schools, hospitals and commercial buildings throughout the nation. Faraday is also the standard of accuracy in thousands of locations where single, Individual Synchronous Clocks are used.
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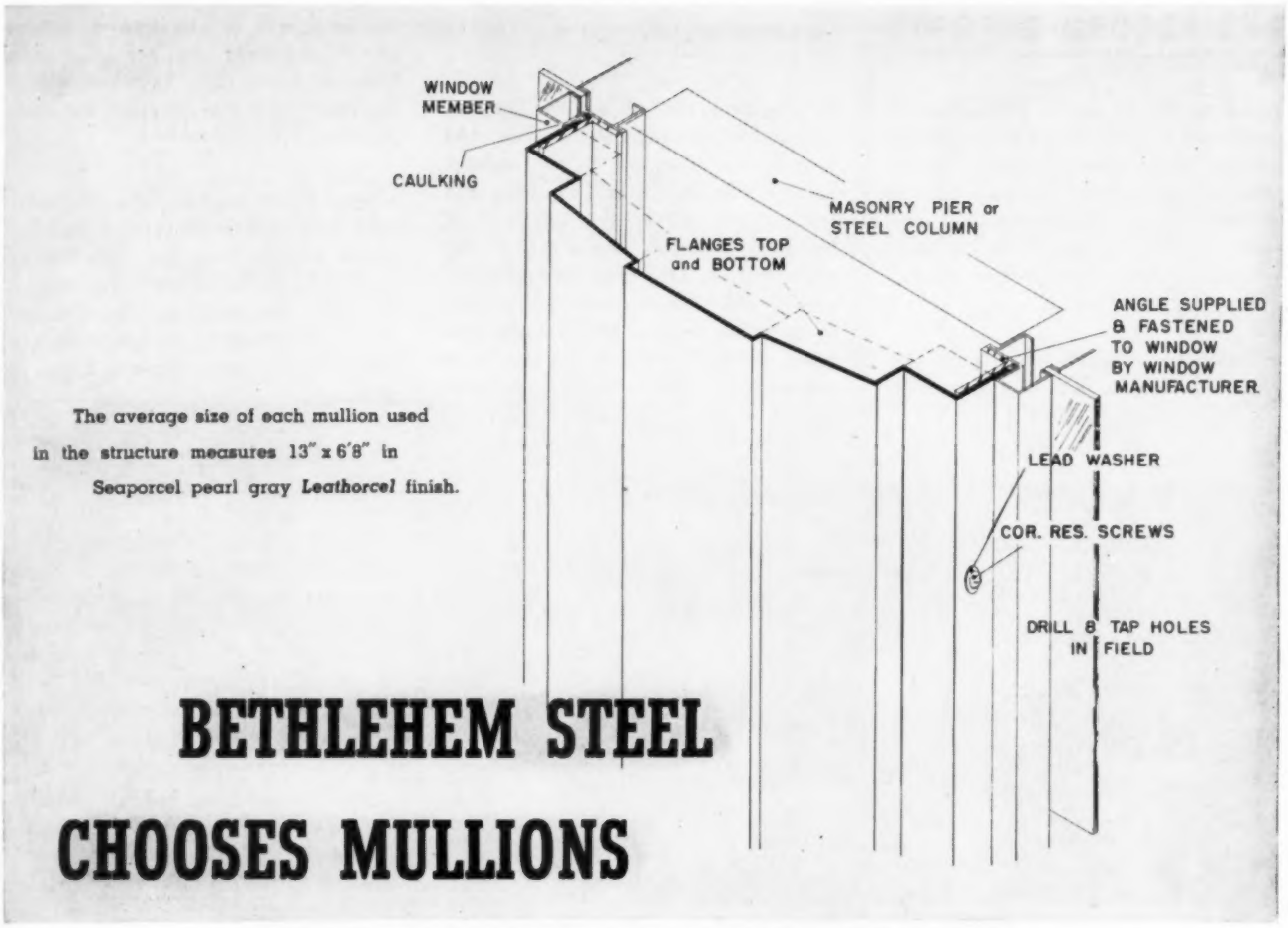
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In selecting Seaporcel Porcelain for the exterior mullions of the Bethlehem Steel Company building, the architects chose this superior building material for durability and color of lasting beauty. Seaporcel porcelain, unaffected by weather and corrosion-resistant, reduces maintenance cost to a negligible factor.

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General Contractors: John W. Harris Assoc., Inc., N. Y.

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COMPLETE ENGINEERING & ERECTION DEPARTMENTS

WASHINGTON (*Cont. from p. 290*)

power would change the present law to authorize private concerns to design, construct and operate reactors to produce power; it would also authorize the Atomic Energy Commission to sell, lease or loan fissionable materials to private concerns under certain security and safety restrictions.

• Under the Defense Department reorganization plan sent to Congress by the President, the Office of the Director of Installations would be abolished and its functions taken over by an Assistant Secretary in charge of Properties and Installations. Under the guidance of Frank R. Creedon, director since the office was established a year ago, the present office has reviewed all military construction projects and has also prepared the first installment of a series of planning standards intended to guide all the services in construction. The completed standards, for barracks, mess halls and warehouses, have been awaiting final Pentagon clearance for some months.

• Senator Taft has agreed "in principle" with a proposal to exempt building trades unions from the Taft-Hartley Labor Act. He said it had never been his intention that building trades unions should be covered by the law, though he added that in some cases it might be necessary.

• New construction expenditures in April increased eight per cent over April 1952 to a total of $2.6 billion, according to the preliminary estimates of the U. S. Labor Department's Bureau of Labor Statistics and the Building Materials Division of the U. S. Department of Commerce. The four-month total rose to $9.6 billion, compared with $9.1 billion in the corresponding period of 1952 — an increase of six per cent.

• The Federal Civil Defense Administration plans to concentrate on provision of individual (backyard and basement) shelters before it thinks about building huge communal shelter areas. Administrator Val Peterson said in a recent radio interview that more research is needed in the field of communal shelters "before we start investing money in shelters of that type." Mr. Peterson is also convinced that atomic weapons development is way ahead of civil defense planning. For fiscal 1954, FCDA will ask Congress for $125 million — $25 million less than the Truman budget figure but almost triple the 1953 appropriation of $43 million.

• The National Production Authority, which most of the time these days is in a welcome eclipse, came forth last month with some orders affecting the operation of the Defense Materials System, the "little CMP" prepared to take over when the Controlled Materials Plan expires on June 30. The orders reduced from 50 to 35 per cent of base period (first six months of 1950) production the amount of construction machinery and equipment (List A products) that would be reserved for defense-rated orders after June 30; told aluminum producers they would be required during third quarter 1953 to eliminate any backlog of military and atomic energy orders carried over; defined set-aside require-

(*Continued on page 298*)

Fairhurst T.M. Reg.

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View shows Unitfold Wall in partly open position.

Wall opened. Folded units are unobtrusive at left. Coolidge, Shepley, Bulfinch & Abbott, Architects.

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An integral part of the modern building, Glide Windows allow design which will be fresh as long as the building lasts.

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Double Glazing... Glide Duo-Glaze Windows will accommodate ½" double-glazing. They are precision built, engineered to carry the extra weight of double-glazing without sacrificing the ease of operation. Glide's superior weatherstripping insures the effectiveness of double-glazing.

Write for complete Glide DUO-GLAZING details.

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WASHINGTON (*Cont. from p. 294*)

ments for manufacturers of copper and copper-base alloy products; and authorized builders and makers of civilian products to procure and use foreign and used controlled materials in excess of second quarter allotments.

• The National Association of Home Builders staged a six-week series of "wake up" meetings in more than 200 cities across the country climaxed by a Washington conference May 26 with leading Administration and Congressional officials to dramatize its "six-point crusade to house the 'forgotten families' of America." The first of N.A.H.B.'s six points was erased with the early May increase in FHA and VA interest rates. The others: modernization of the down payment and loan amortization pattern "to extend home ownership to the mass market of middle and lower income families and assure continued production of 1,000,000 or more new homes annually;" an effective trade-in program, aided by more liberal, longer-term FHA-insured loans; liberalized home repair loans to encourage reconditioning of old but structurally sound houses; slum rehabilitation through local policing powers; slum clearance and urban redevelopment, where rehabilitation is impracticable.

• "Blueprint for Action to Build America Better" is the proposal of the National Association of Real Estate Boards for dealing with slum problems. The booklet, which has been sent to all 1139 member real estate boards, proposes creation of a neighborhood conservation and development commission in every city to eliminate blight and slum conditions. N.A.R.E.B. President Charles Shattuck has described the *Blueprint* as the Association's first move to expand its current civic drives for enforcement of long-dormant ordinances on housing standards.

• The Chamber of Commerce of the United States has announced some changes in its stand on national issues affecting construction and civic development. In the area of housing and community development, the Chamber now proposes rigorous enforcement of local sanitary and housing ordinances to insure livability of existing housing; reappraisal of the Federal Government's activities; flexible interest rates on insured and guaranteed mortgages; elimination of direct lending; separation of welfare housing activities; encouragement of private secondary markets for mortgages. Opposition to subsidized housing is continued.

In the field of public works construction, the Chamber suggests reappraisal of federal activities; better definition of state and local government responsibilities; proper programming and review of federal and nonfederal public works construction. It also suggests that such construction cannot be efficiently adapted to relief operations nor to stabilization of the entire economy.

CORRECTION

The Industrial National Auto-bank shown on page 24 of the March issue of the RECORD is located in Detroit, not, as the caption stated, in Cleveland. Louis G. Redstone of Detroit was the architect.

(*More news on page 302*)

Check these advantages -

New Slide-Away Saves Valuable Space. Homeowners appreciate the extra wall and floor space made possible with this new door. Builders like them too, for they eliminate door-swing "problem areas".

New Slide-Away is Easy-to-Install. Made of heavy gauge steel channel with wood core, the Slide-Away frame nails to ordinary studding. Hanger hardware comes as kit and converts standard 1⅜" AMWELD steel door to Slide-Away in a matter of minutes. All steel door construction eliminates warping, shrinking or cracking.

Brass Finger Pulls or Latch Sets. Take your choice—finger pulls for closets and other simple door closures—latch sets where the Slide-Away is used on bathrooms and bedrooms.

Two Sizes Available. New Slide-Away is furnished 2'6" and 2'8" wide and 6'8" high. Doors are finished on both sides—prime coated and ready for your choice of finish.

Free Booklet Available. Learn how AMWELD Building Products can help cut construction costs—improve the appearance of the homes you build. Send for fully illustrated folder containing complete installation details.

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DARIEN, CONN., JUNIOR HIGH IS AWARD WINNER

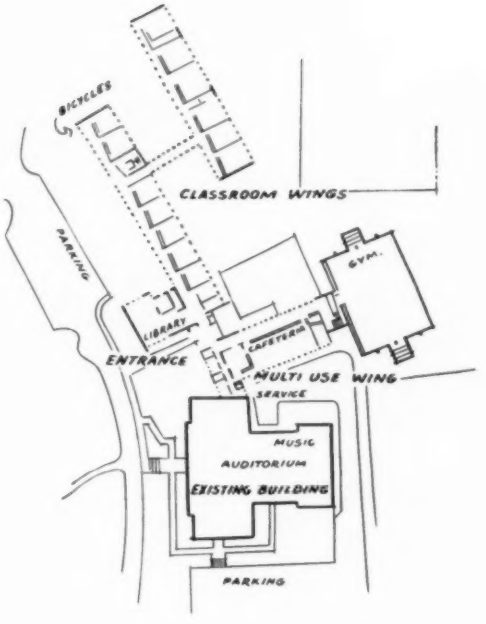
Darien, Conn., Junior High School was among the major award winners in the recently-completed second annual Competition for Better School Design. This competition, sponsored by a leading school magazine, encourages creativeness in the design of school buildings. Ketchum, Gina & Sharp, of New York City, were the architects.

Built as additions to an existing building, modern, one-story wings now provide students at Darien Junior High with needed classrooms and other facilities.

The arrangement of the wings, good site solution, and good separation of classroom and athletic facilities were features that won the award.

All of the new wings have roof structures built with Bethlehem Open-Web Steel Joists. These joists, 100 per cent prefabricated, reached the construction site marked and ready for placing, and were installed without special equipment and falsework.

Besides their use in one-story buildings, Bethlehem Open-Web Steel Joists offer an economical way to obtain fire-safety in multiple-story schools and other types of light-occupancy buildings. The combination of these joists with concrete floor slab and plaster ceiling makes a floor structure with a fire-resistance of from one to four hours, depending upon thickness of slab and type of plaster used.



Architects: Ketchum, Gina & Sharp, New York, N. Y. *General Contractors:* James Romeo & Associates, Tuckahoe, N. Y.

BETHLEHEM STEEL COMPANY BETHLEHEM PA.
On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM OPEN-WEB STEEL JOISTS

BETHLEHEM STEEL

THE RECORD REPORTS

(*Continued from page 298*)

ON THE CALENDAR

June 2: Annual meeting, Chicago Chapter, American Institute of Architects.

June 7–14: 1953 Boston Art Festival — Public Garden, Boston.

June 9–12: Fourth National Store Modernization, Building and Maintenance Show — Madison Square Garden, New York City.

June 10–13: Annual meeting of the Board of Directors, American Institute of Architects — Olympic Hotel, Seattle, Wash.

June 15–18: Seventh Short Course on Hot Water and Steam Heating Systems, co-sponsored by the University of Illinois and the Institute of Boiler and Radiator Manufacturers — University of Illinois, Urbana, Ill.

June 15–19: 85th Annual Convention, the American Institute of Architects — Olympic Hotel, Seattle, Wash.

June 15–19: Exposition of Basic Materials for Industry: an international exposition for product development — Grand Central Palace, New York City.

June 15–19: Summer General Meeting, American Institute of Electrical Engineers — Chalfonte-Haddon Hall, Atlantic City, N. J.

June 16–18: Materials Conference in conjunction with Exposition of Basic Materials for Industry — Hotel Roosevelt, New York City.

June 16–19: National Spring Technical Meeting, American Welding Society — Hotel Shamrock, Houston, Tex.

June 18–19: Annual meeting, National Society of Professional Engineers — Sheraton-Beach Hotel, Daytona Beach, Fla.

June 22–26: 1953 Annual Meeting, American Society for Engineering Education — University of Florida, Gainesville, Fla.

June 23–25: Modern Highways: a conference on survey, planning and design; co-sponsored by Departments of Civil and Sanitary Engineering at Massachusetts Institute of Technology and Massachusetts Department of Public Works — Massachusetts Institute of Technology, Cambridge, Mass.

June 25–27: Annual meeting, American Institute of Planners — Mark Hopkins Hotel, San Francisco, Calif.

June 25 throughout the year: Good Design: selections of home furnishings from items put on the market during previous six months; continuing exhibition sponsored by Museum of Modern Art, New York City, and Merchandise Mart, Chicago — Merchandise Mart.

June 28–July 3: National Education Association — Miami Beach, Fla.

June 29–July 3: Annual meeting, American Society for Testing Materials — Chalfonte-Haddon Hall, Atlantic City, N. J.

June 29–July 1: Semi-annual meeting, American Society of Heating and Ventilating Engineers — Cosmopolitan Hotel, Denver, Colo.

June 29–July 3: School Planning: 1953 Summer Conference — School of Education, Stanford University, Stanford, Calif.

July 6–17: Advanced Strength of Materials: a special summer program — Massachusetts Institute of Technology, Cambridge, Mass.

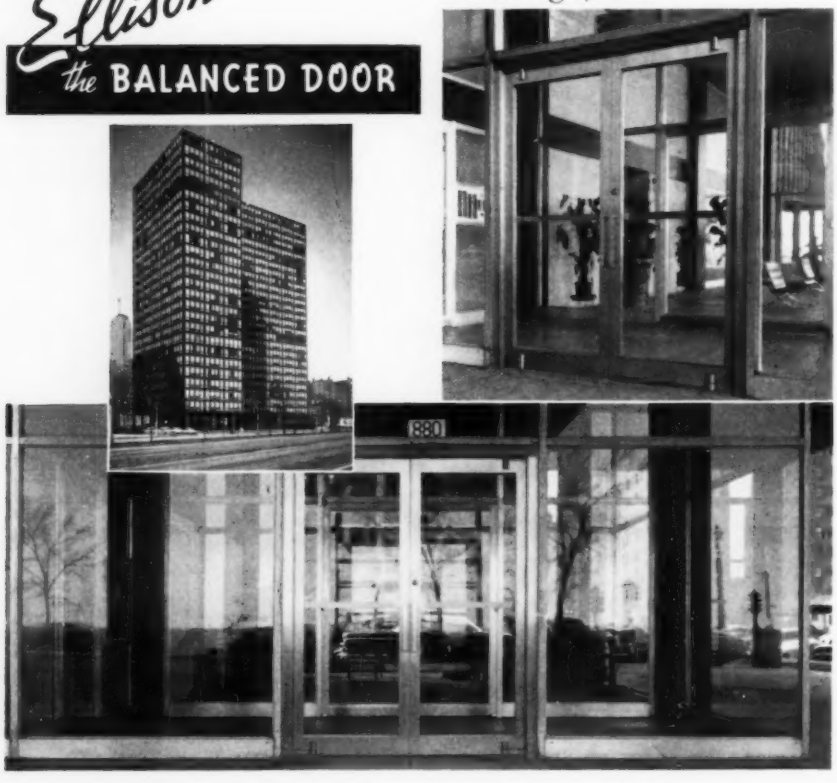
July 11–Aug. 22: Fourth Annual Design Workshop for Students of Archi-

(*Continued on page 306*)

IN THE ENTRANCES TO

860 Lake Shore Drive Apartments
Chicago, Ill.

Ellison the BALANCED DOOR



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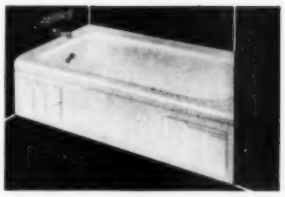
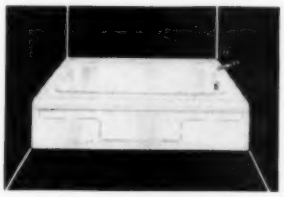
Whether your specifications call for sanitary fixtures in glistening gleaming white or for bathroom units of matched color in pink, tan, blue, green or grey, you'll find a wide choice in AllianceWare—preferred by an ever-increasing number of progressive architects and builders from coast to coast.





BATHTUBS

5-foot recess tubs of porcelain-on-steel each with an integral wall guard flange on three sides that prevents water leaks between the tub and the wall.

Also a 42" "Junior" recess tub that has great advantages as a shower receptor.

All AllianceWare bathtubs are available in white and five colors.

LAVATORIES

Wall-hung *shelf back lavatory* of porcelain-on-steel with or without overflow.

Flat rim lavatory with deep and generous bowl for tile or linoleum installations.

All AllianceWare lavatories are available in white and five colors.

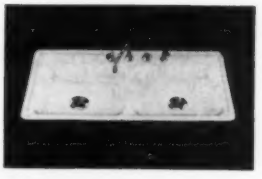
CLOSETS

Close-coupled combinations—one a reverse trap, the other a wash down—the types most popular in today's construction. Each style assures positive, quick flushing.

Available in white and five colors.

DE LUXE SINKS

Porcelain-on-steel formed from 14 gauge. These sinks have double bowls or single bowls. Sliding drain boards are optional on some models. May be mounted on standard sink cabinets. Several models may be installed on legs without cabinet.



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Single bowl or double bowl, with and without faucet ledge. Also sink and tray combinations with and without faucet ledge. The design of these sinks permits a continuous tile or linoleum drainboard to run flush with the edges of the rims.

Write for the complete AllianceWare catalog of detailed specifications and installation diagrams.

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Bathtubs • Lavatories • Closets • Sinks

AllianceWare
PORCELAIN ON STEEL

THE RECORD REPORTS

(*Continued from page 302*)

tecture — Instituto Tecnologico de Monterrey, Mexico.

July 11–Aug. 24: Creative Art Workshop and conducted field tour for the study of art treasures of France and Italy, under the direction of Andre Racz. Information from Margit Pinter, c/o British-American Tours, 542 Fifth Ave., New York 36, N. Y.

July 27–Aug. 14: School Plant planning Workshop conducted by Department of Architecture and Architectural Engineering — University of Colorado, Boulder, Colo.

Aug. 5–Sept. 20: An exhibition of furniture manufactured by Thonet Industries, Inc., marking the 100th anniversary of the New York branch — Museum of Modern Art, 11 W. 53rd St., New York City.

Aug. 24–Sept. 4: Special Summer Program in Noise Reduction — Massachusetts Institute of Technology, Cambridge 39, Mass.

Aug. 24–Sept. 4: 15th Annual Seminar on City and Regional Planning — Massachusetts Institute of Technology, Cambridge 39, Mass.

Aug. 30–Sept. 9: Leipzig Fair 1953, "for capital and consumer goods" — Technical Fair Grounds, Leipzig.

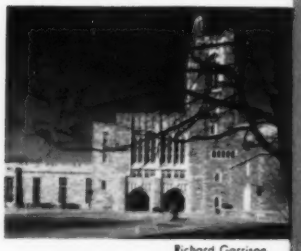
Aug. 31–Sept. 3: Annual Convention, American Hospital Association — San Francisco.

Hardware: Grant no.1 sliding door hangers

Location: Firestone Library, Princeton University

Application: sliding doors for individual reading rooms

Architects: O'Connor & Kilham



Richard Garrison

quiet, please:

library.

specifications:

number 1 sliding door hardware by

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OFFICE NOTES

Offices Opened

• Alfred Watts Grant, A.I.A., has announced the opening of a branch office. The address is P. O. Box 161, Pueblo, Colo.

• Harry J. Harman, Architect, William A. Cohen and Arthur Lowenfish announce the opening of their offices at 1860 Broadway, New York 23, N. Y. The firm will be known as Harman Associates.

• R. Daniel Hart, Architect, has announced his partnership with Hugh J. Leitch, Architect, with offices at 614 Brent Annex, Pensacola, Fla.

• Douglas Honnold, A.I.A., and John Rex, A.I.A., have announced the opening of an office at 306 N. Doheny Drive, Los Angeles 48, Calif.

• Harry Loners, A.I.A., has announced the opening of his offices at 418 N. 25th St., Billings, Mont.

• Norton Polivnick, A.I.A., has announced the opening of an office for the practice of architecture at 1225 Bannock St., Denver, Colo.

• Henry Schubart Jr., A.I.A., and Howard A. Friedman, A.I.A., have opened offices at 230 California St., San Francisco 11, Calif. The firm will be known as Schubart & Friedman, Architects.

• Williams, Williams & Williams, Architects, have announced the opening of their new offices in the Oasis Building, 121 South Palm Canyon Drive, Palm Springs, Calif.

(*Continued on page 310*)

UNIVERSAL★RUNDLE quality leadership is easily *PROVED!*

It's proved in the laboratory!

You can get *plenty of proof* of U/R leadership in the laboratory, where scientific instruments measure fixture quality. This spectrophotometer, for example, precisely measures the accuracy of Universal-Rundle color matchings, in addition to proving that U/R Arctic White fixtures are the *whitest* fixtures made.

And here's more proof of U/R leadership:

The UNI-LOX Hanger

This patented, exclusive new Universal-Rundle hanger is the easy, fast way to install china lavatories—permanently. Just look at these features:

Easy to fasten to wall . . . no matter what type of building construction.

Easy to align . . . no problem of aligning holes in china with hanger holes.

Firm grip . . . no danger of jostling lavatory off hanger . . . the toggle bolts pull the lavatory into place and *keep* it there!

Positive pull down . . . tightening the toggle bolts automatically pulls lavatory down firmly onto the hanger!

Easy to level . . . no squinting or measuring—simply level back of hanger, and the lavatory will be level!

FAMOUS "FIRSTS" like these are *more proof* of U/R leadership!

FIRST colored vitreous china bathroom fixtures!

FIRST free standing uni-closet!

FIRST rim-jet flushing action!

FIRST concealed front overflow lavatory!

FIRST one-fire Hi-Fire process to produce harder-than-steel surface!

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The World's Finest Bathroom Fixtures
by **Universal★Rundle**

Plants in Camden, New Jersey; Milwaukee, Wisconsin; New Castle, Pa.; Redlands, Calif.; San Antonio and Hondo, Texas.

THE RECORD REPORTS

(*Continued from page 306*)

New Firms, Firm Changes

• Eckbo, Royston & Williams, Landscape Architects and Planning Consultants of San Francisco, have announced the association of Francis Hill Dean with the firm as a limited partner.

• Bernard Eichwald has announced the opening of a consulting engineering firm, to be known as Eichwald Associates, at 237 East 39th St., New York, N. Y., and at New Haven, Conn.

• Paul Hesson and Allan May announce the formation of a partnership for the practice of architecture. The firm will be known as Hesson & May, Architects, and will be located at 148 Olmos Drive West, San Antonio, Tex.

• Haarstick Lundgren and Associates have announced that eight of their employees have been made associate members of the firm. The new associates are William B. Berget, Robert E. Howe, John T. Baker, George F. Klein Jr., James D. Voigt, Sidney C. Little, Robert T. Jackels and Gregory P. Molitor.

• The architectural firm of Slifer & Cone will hereafter be known as Cone & Peterson, the offices remaining at 444 Endicott, St. Paul, Minn.

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New Addresses

S. Brian Baylinson, Architect, 200 W. 57th St., Suite 503, New York 19, N. Y.

Edward O. Blodgett, Architect, 1615 Polk St., San Francisco 9, Calif.

Bolton and Barnstone, 811 Lovett Blvd., Houston 6, Tex.

Daumit & Sargent, Architects, 145 Kennedy St., N.W., Washington 11, D. C.

Matthew B. Ehrlich, Architect, 1 N. 13th St., Philadelphia 7, Pa.

Philip Friedman, Architect, Box 777, Florence, Ariz.

P. B. Harrison Jr., 4205 Sequoia Rd., Columbia, S. C.

Auguste Martineau, A.D.B.A., M.R.A.I.C., Masoud Building, Kingston, Ont.

Paul Meschino, Architect, 122 Elmwood Ave., Willowdale, Ont.

Harlan E. Rathbun, Architect, 1304 Cherokee St., Denver, Colo.

Leonard G. Spangenberg, Jr., Architect, 340 Poindexter Drive, Pass Christian Isles, Pass Christian, Miss.

Clarence H. Woolmington, Architect and Engineer, 1731 Spring Garden St., Philadelphia 2, Pa.

ELECTIONS, APPOINTMENTS

• James A. Britton of Greenfield, Mass. has been designated chairman of the Massachusetts State Planning Board. He has served as a member of the board since 1942.

• Le Corbusier has been elected an honorary associate of the National Institute of Arts and Letters, together with the Italian composer Gian Carlo Menotti, the French writer Colette and the English philosopher Sir Bertrand Russell.

(*Continued on page 312*)

"CONCRETE JOIST FLOOR CONSTRUCTION WAS SELECTED BECAUSE OF ITS ECONOMY AND PERMANENCE"

LaRue Carter Memorial Hospital, Indianapolis, Indiana
Architects: Daggett, Naegele & Daggett, Inc.

DAGGETT, NAEGELE & DAGGETT, INC.
ARCHITECTS

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INDIANA

ROBERT FROST DAGGETT, F. A. I. A.
ROBERT FROST DAGGETT, JR. A. I. A.
F. HAROLD NAEGELE, A. I. A.

March 30, 1953

Mr. Harry C. Delzell
c/o Concrete Reinforcing Steel Institute
38 South Dearborn Street
Chicago 3, Illinois

Dear Mr. Delzell:

Concrete Joist floor construction was used in the recently completed Indianapolis LaRue Carter Memorial Hospital. This type of construction was selected because of its economy and permanence.

With the use of Concrete Joists, material was saved and dead floor weight reduced. Consequently, smaller framing members could be used, appreciably lowering costs. Using prefabricated, removable forms saved construction time which also resulted in lower costs.

This permanent type of construction, monolithic and rigid, with all members poured in place, lessens deflections and vibrations and the attendant expensive maintenance. This construction stands up well under the normal stresses of use and weather as well as the possible impact of fire or shock.

The space between the concrete joists was used to house pipes and conduit where suspended acoustical ceilings occurred. In those locations not requiring flat ceilings, the exposed concrete joist floor construction was pleasing in appearance.

We are well pleased with the results.

Sincerely yours,

Daggett, Naegele & Daggett, Inc.

By Robert Frost Daggett
Robert Frost Daggett

CONCRETE REINFORCING STEEL INSTITUTE

38 S. Dearborn St.
Chicago 3, Ill.

THE RECORD REPORTS

(*Continued from page 310*)

• The following architects, together with a group of painters, sculptors and graphic artists, have been elected to associate membership in the National Academy of Design: Pietro Belluschi, Cambridge, Mass.; Charles Collens, Boston, Mass.; Burnham Hoyt, Denver, Col.; and Charles Butler, William Gehron, Richard A. Kimball, Robert David Kohn, Robert B. O'Connor, Edward D. Stone, Edgar I. Williams and Frederick J. Woodbridge, all of New York City.

• Michael J. Long, realtor and appraiser, has been elected chairman of the Chicago Land Clearance Commission, succeeding John McKinlay. Mr. McKinlay, who was the commission's first chairman, died March 9. Other new officers are: Herman O. Walther, vice-chairman; John Ross Humphreys, treasurer; and Truman K. Gibson, secretary.

• New officers of the Arizona Chapter of the American Institute of Architects are as follows: president, Lew Place of Tucson; vice president, Ralph Haver of Phoenix; secretary, Frederic O. Knipe of Tucson; treasurer, James W. Elmore of Phoenix.

• William D. Hamilton has been appointed executive secretary of the American Institute of Decorators. He succeeds Mrs. M. M. Girard, who has served as executive secretary for the past 21½ years.

• C. George Dandrow, vice president of Johns-Manville Corp., has been re-elected president of the New York Building Congress. Other new officers are — *vice presidents:* Robert Allan Jacobs (Kahn & Jacobs); A. E. McKenzie (eastern regional manager of Detroit Steel Products Co.); Howard McSpedon (president of the Building and Construction Trades Council of Greater New York); A. Walter Nelson (president of C. E. Halback & Co.); and H. C. Turner, Jr. (president of Turner Construction Co.); *treasurer:* Otto L. Nelson (vice president, New York Life Insurance Co.); *secretary:* Vernon Jarboe (Gens-Jarboe, Inc.); *chairman of the Finance Committee:* Charles A. Selby (vice president of Vermilya-Brown Co., Inc.)

• Charles M. Mortensen, managing director of the Producers' Council, Inc., has been appointed associate manager of the trade association department of the Chamber of Commerce of the United States. He will succeed Henry P. Fowler, present manager of the department, upon the latter's retirement on August 31.

NEW THE ALL-PURPOSE TREATMENT

for protection of all types of exterior masonry above grade

MINWAX TRANSPARENT (SILICONE BASE)

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Not affected by cold . . . lasts far longer . . . little or no effect on color tone or appearance of masonry surfaces!

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ADDRESS.....

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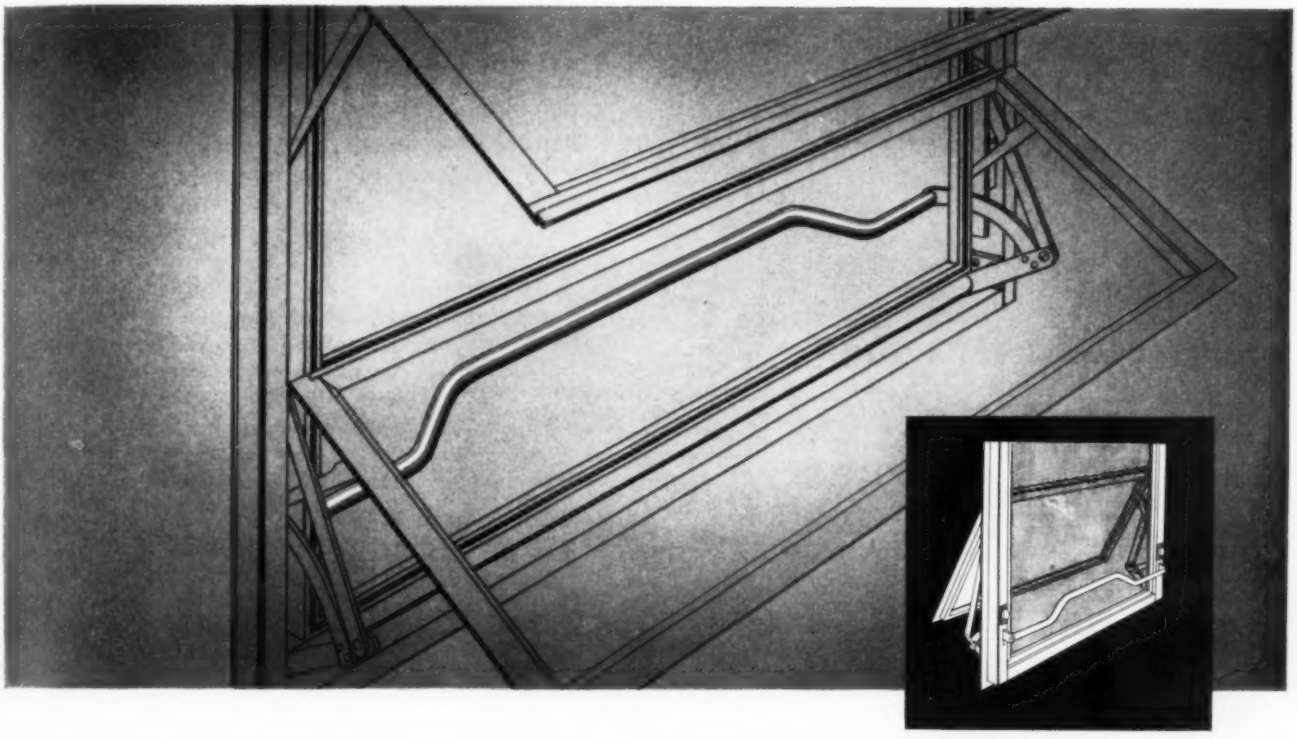
AT THE COLLEGES

Illinois Festivities Honor First Architecture Graduate

One of the high spots this year at the University of Illinois was a celebration of the eightieth anniversary of the graduation of Dr. Nathan Clifford Ricker (1843–1924) who was not only the first graduate of the university's department of architecture, but the first collegiate graduate in architecture

(*Continued on page 314*)

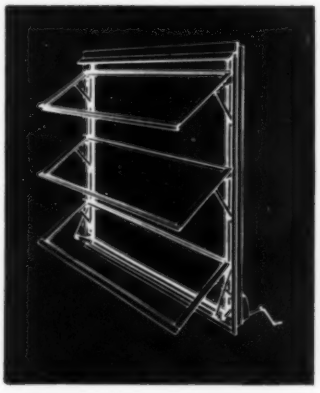
NEW optional BALANCE BAR OPERATOR*



Now You *CAN* Use Screens With A "Push Out" Type Operator*

NEW optional NEW operator NEW

The new Series "54" Miami Window is designed with an optional *Balance Bar Operator. The operator arm extends through the window frame allowing you to screen the window completely. This feature is especially important in installations such as hospitals, schools and cafeterias where insect protection is demanded...the all-aluminum Miami Window is the only window designed* with this feature.



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Every Miami Window is acid dipped and lacquered at *NO INCREASE* in cost. This means lifetime beauty and *NO* plaster stains during building construction. Weatherstripped for tightest closing and positive protection.

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THE RECORD REPORTS

(*Continued from page 312*)

in the United States. Proceedings included an exhibition of Dr. Ricker's work, a student design problem in his honor, and an anniversary program at which former friends and students spoke.

Dr. Ricker was chairman of the department of architecture at Illinois from 1873 to 1910, and also served as dean of the college of engineering from 1878 until 1906. He was the author of numerous technical publications on design, construction and engineering, and translated more than 50 volumes of French and German works on architecture for the benefit of his students. He also served as architect for several buildings on the university's campus in addition to his academic duties. His achievements as an educator include transformation of the university shop courses, introduction of the first course in Graphic Statics in an American architectural curriculum, introduction of the curriculum in architectural engineering in response to the demand for men trained in skeleton construction for high buildings, and a concern for a sound graduate program in architecture. Dr. Ricker also played a leading role in securing the Illinois act for the registration of architects — the first such act in the country — and served as chairman of the commission to codify the building laws of Illinois.

The anniversary exhibition of Dr. Ricker's work included selections from his publications and translations, samples of his notes on architectural drawing, structural design and history, and photographs of four of his buildings for the university campus. Photographs of Acton, Me., where he was born in 1843, were also included.

At the anniversary program, three of the four speakers were students and friends of Dr. Ricker. Dean Rexford Newcomb of the College of Fine and Applied Arts presided and related some of his experiences with Dr. Ricker. Personal reminiscences were also related by Professor Loring H. Provine, who was head of the department of architecture from 1914 to 1948. Associate Dean Cyrus E. Palmer introduced Miss Ethel Ricker, Dr. Ricker's daughter, and other graduates present who had known him. Dr. Turpin C. Bannister, present head of the department of architecture, spoke on Dr. Ricker's contributions to architectural education.

Award winners in the student competition for a commemorative foyer in honor of Dr. Ricker were George R. Boldt of Chicago (first prize) and J. Ernest Gonzales, Oxnard, Calif. (second prize).

• "Advanced Strength of Materials," a special summer program designed especially for structural engineers and teachers, will be held July 6–17 at the Massachusetts Institute of Technology. Among topics to be included will be a review of general methods of strength of materials with applications to beams, shafts, discs, plates and shells; a study of stresses and deflections of thin-walled structures with and without stiffeners; and sessions on buckling and elastic stability and effects of large deformations. Applications for the program may be made to the Director of the Summer Session, Room 3–107, Massachusetts Institute of Technology, Cambridge 39, Mass.

(*More news on page 316*)

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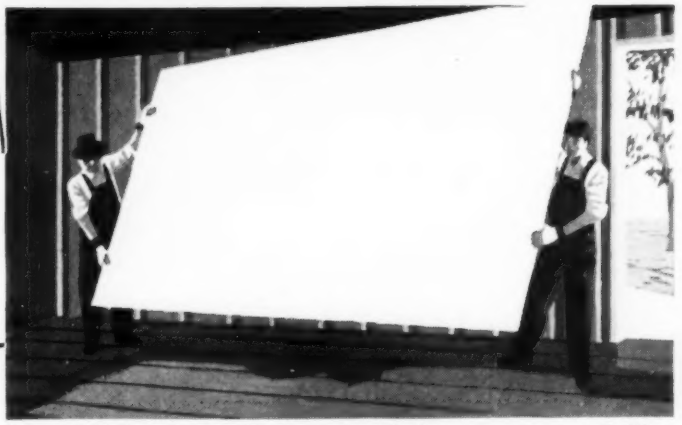

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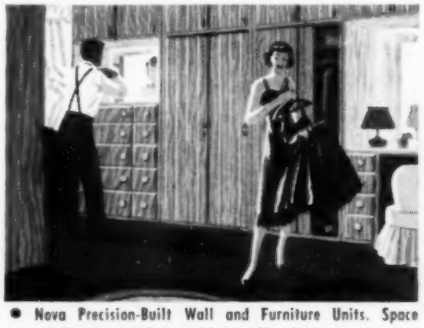

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THE RECORD REPORTS

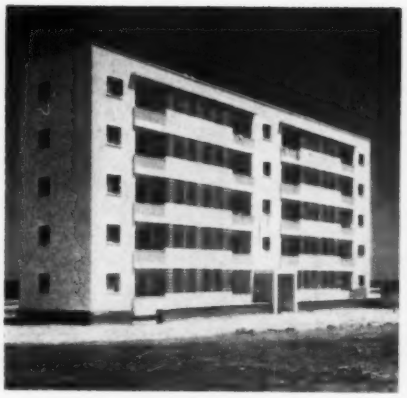
(*Continued from page 314*)

PERIODICAL REPORT

L'Architecture Française

No. 131–132

The architecture of Morocco is the subject of the entire issue of the French magazine this month. The second issue of the journal within three years to be entirely devoted to Moroccan building, it features an article by Pierre Parinet, chief of Morocco's public housing service and engineer of roads and bridges, who discusses housing in the protectorate. In addition to this article, the issue is comprised of a great many individual presentations of Moroccan buildings of all types. Included are apartment houses, office buildings, public buildings, residences, schools, hospitals, stores, theaters, churches, airports, hotels and power stations. Two of the buildings presented in the issue are shown on this page.



Two examples of current Morrocan architecture. Left, part of a collective housing project in Casablanca. Right, interior of a villa in the same city

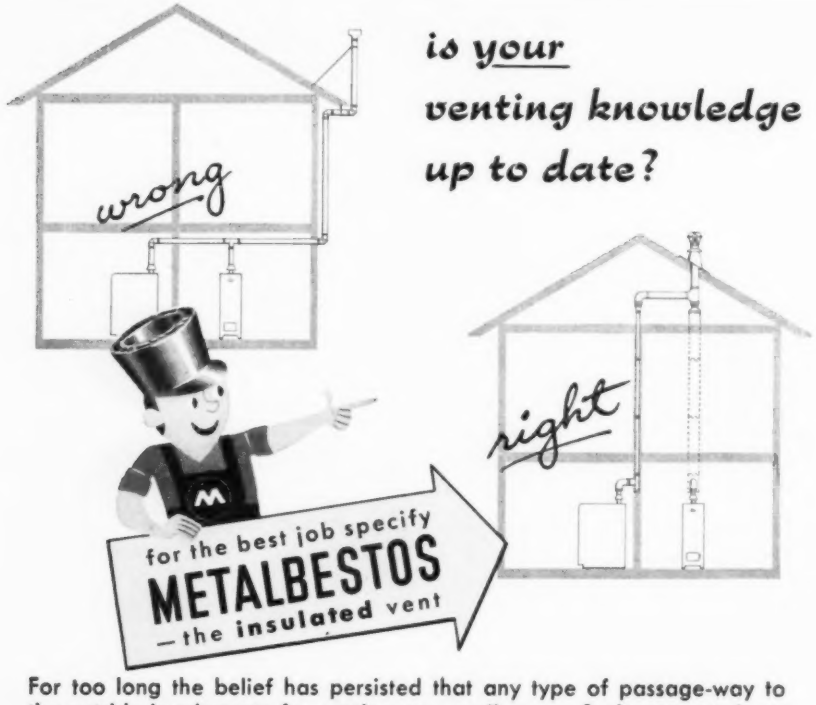
Journal of the Royal Architectural Institute of Canada

March, 1953

With this issue, the *Journal* embarks on a new policy of publishing each year — and in turn — an issue devoted entirely to the policies, practices and products of one of Canada's five schools of architecture. In the past, an annual issue has been turned over to all five schools together, but it was decided that no school could present its program adequately under this scheme. Commenting on the new policy, the editors write: ". . . (It) has the obvious merit of permitting a school to state its case with reasonable thoroughness; its only fault being that each school can hibernate, as far as the Institute is concerned, for a period of five years."

Leading off under the new policy is the University of Toronto's School of Architecture. H. H. Madill, the school's director, contributes an article on architectural education at the university in

(*Continued on page 318*)



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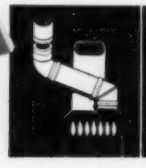

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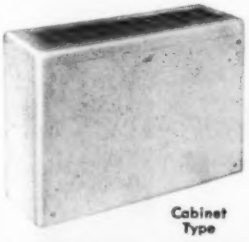

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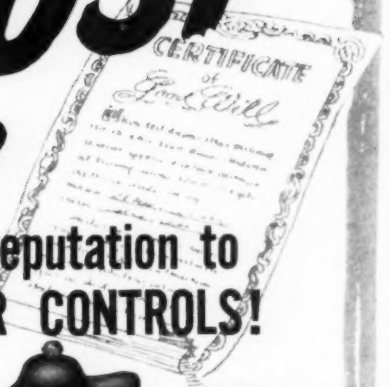

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THE RECORD REPORTS

(*Continued from page 316*)

which he outlines the curriculum. Separate articles on basic design, architectural design and town planning curricula follow, each illustrated with examples of student work. Articles on a field trip to New York and the university's architectural society are also included. To round out the issue, a fifth year thesis by a student at the school, David Powrie, is appended. Mr. Powrie's essay is a general speculative investigation of the state of architecture today, and as one student's student's-eye view of things, it contains some interesting observations, including the following wholehearted blast at the longsuffering architectural press:

Toronto student Allan Young's third year project for a General Motors sales and service outlet

"The popularization of the modern idiom today is being abetted largely through the efforts of the architectural and building magazines, and it may be assumed that, as in other cases of mass media, they wield a mighty pen. But of course the turn-about that is characteristic of mass media, the fact that they expound only what they feel will sell, leads one to suspect that they are no indication whatever of what serious men in architecture are thinking. It only takes a glance at many of these periodicals to realize that they regard architecture in much the same way that *Vogue* regards clothing. It is, perhaps, inevitable that architecture will become a thing of fashion when such widespread propagation seizes every idea and spews it across the world for the entertainment of great masses of people who can never know the meaning of architecture. The North American ideal of something new every day is implicit in these publications and the spectacle of them vying for the publication of new buildings and outdoing each other in lavish praise of the buildings' merits is amusing and saddening at once."

Domus

March, 1953

Gio Ponti, the well-known Italian architect who manages to take time from his practice to edit *Domus*, also found time last Fall to attend the Eighth Pan-American Conference of Architects. Among the sights he saw in the western hemisphere was the Pedregal Gardens project in Mexico City. In the magazine's March issue, he delivers a report on his impressions of the project, partly as follows:

"The Pedregal Gardens are a splendid example of a perfectly successful enterprise. Architect Barragan has had not only the rare insight to discover this forgotten bad land (outside) Mexico City, but he had the faith and the courage to invest in this project his economic and professional future. It is a kind of lyric 'land reclamation' project. Nobody would believe him when he started the project by buying most of this cheap land, but his vision and his

(*Continued on page 320*)

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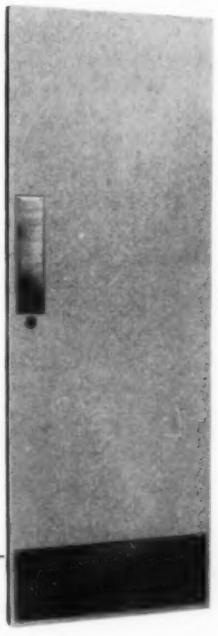

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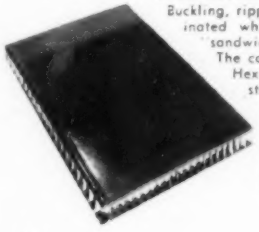

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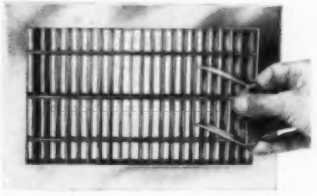

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THE RECORD REPORTS

(*Continued from page 318*)

planning of beauty have carried out a scheme which is a real achievement. The 'conditions' for building were felt by happy intuition by this artist with a sense of beauty combined with common sense in business. This is the real problem for an architect: laws and special funds, mortgages and plans do not give us a better architecture; this is the architect's business, this is the true problem for an architect, here is the social value of architecture."

These last remarks concerning Pedregal Gardens were probably occasioned by the principal topic of the Pan-American Conference, which had to do with the conditions which delimit building activities. Of this, Ponti also says: "It is strictly an un-architectural subject. Sociologists, physicians, health authorities, economic experts, philosophers and bankers should debate the subject, and architects should sit simply as observers. But the large number of architects with deep experience with these problems justifies the main subject of the Conference. The danger in solving the preliminary problems is in that process to develop architects so involved in organizational activities that they are unable to face the architectural issues involved."

Mexico City's Pedregal Gardens project, which impressed Domus editor, Gio Ponti

Still another point on the Conference agenda with which Ponti takes issue, and which his impressions of Pedregal Gardens serve as an exemplum for, is the matter of collective planning: "The conference seemed to believe that the collective character should be fostered in architectural planning. [I] believe that the collective activities are justified at the research stage, at the technical or social level, [but that] when the architectural stage is reached, the individual character of the architect as an artist should be preserved. The University City of Mexico is not a real collective job, but the integration of individual work into one unity. At the University City one can recognize the handwriting of several architects, their merits and weaknesses: at the Pedregal Gardens, one feels the presence of one man and his strong personality. Barragan ought to be admired not only as an artist but as a man of will and courage. He stands as a sharp reminder of the times one did not dare to believe in one's dreams. His character, his human and manly qualities are apparent in his own house: as daring in thought as it was faithful in the construction: the house of an artist, and the house of a man."

Briefly Noted

• Among buildings presented in the February issue of the Dutch magazine *Forum*, is a church at Amstelveen, for

(*Continued on page 322*)

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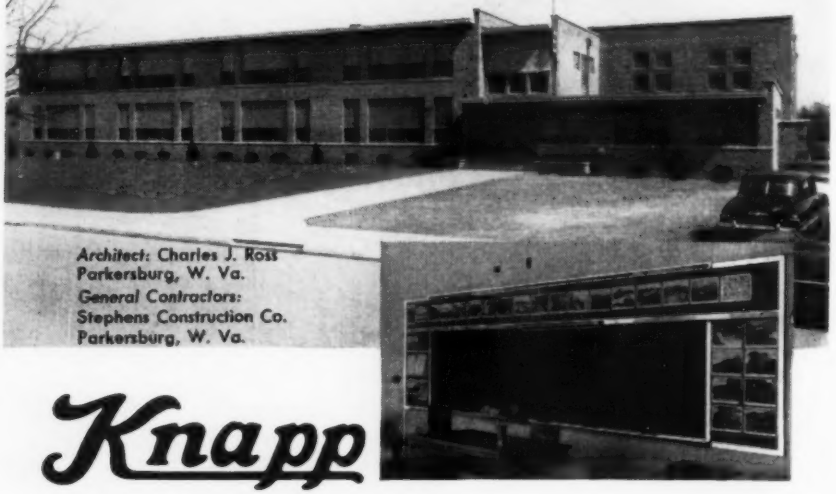

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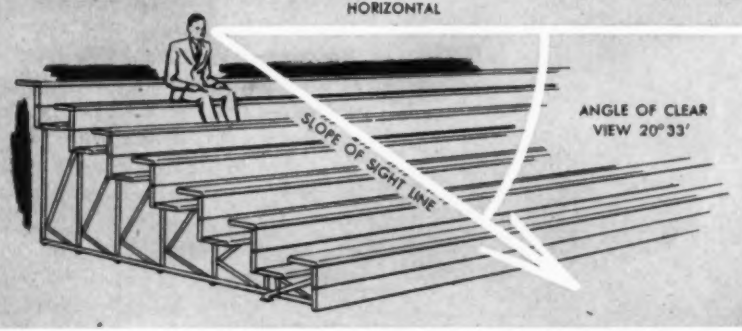

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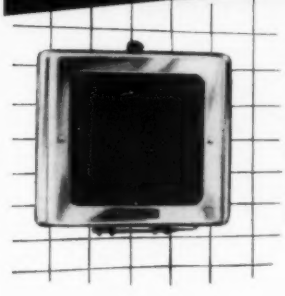

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THE RECORD REPORTS

(*Continued from page 320*)

which Marius Duintjer was architect. The church has been presented to American architects in ARCHITECTURAL RECORD, February 1952, pp. 114–119.

• Two Japanese magazines, *Sinkentiku* and *Kenchiku Bunka*, feature in their March issues the large new quarters for the graduate school of Hosei University in Tokyo, for which Hirosi Ohe is architect and Masayosi Tanaka engineer.

Commenting on the structure (in its own translation) *Kenchiku Bunka* says: "The building represents the first stage of Reconstruction Plan of the Hosei University. Having taken esprit of American architecture as well as Japanese climates, it produces a unique feature and complete harmony of the West and the East. The first floor is reserved for gay meeting of students and professors. The six stories reinforced concrete building is facing the south and of anti-earthquake. Professor Ohe the designer joyfully boasts that he has specially taken care of Climatic changes peculiar to Japan through the overall use of glass at the Southern phase. At the moment, it has no lift but, when another building is constructed annex, there will be 'lifts' to take care both buildings."

• The Norwegian magazine *Byggekunst* features in its January issue an article on the use of color in architecture. The article was written by architect Johan Pedersen.

AMERICANS ABROAD

• The Seattle office of Paul Thiry and the Istanbul Hilton Hotel by Skidmore, Owings & Merrill with Sedad H. Eldem, both of which buildings appeared in the January 1953 issue of ARCHITECTURAL RECORD, are reprinted in the April issue of the Japanese magazine, *Kenchiku Bunka*. In the March issue of the same magazine, two other buildings from the RECORD were featured, a house designed for himself by Joseph Marlowe, and an exhibition pavilion designed by Luciano Baldessari and Marcello Grisotti for Italy's La Breda company. The Marlowe house appeared in the RECORD's December 1952 issue, pp. 146–148, and the Breda pavilion appeared on p. 18 of the October 1952 issue.

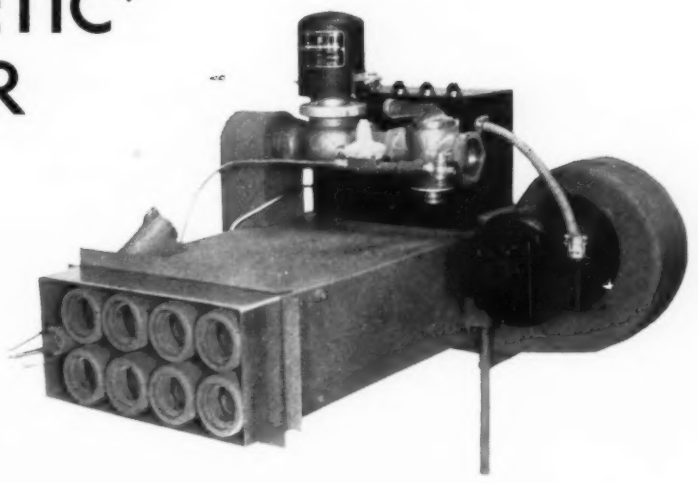
• The English magazine, *Building Digest*, prints in its April issue a report on another building first published in the RECORD, the First Methodist Church in North Little Rock, Ark. (see February 1953 issue, pp. 132–139). Architects are Brueggeman, Swaim and Allen. The February issue of the English magazine reported on the Sunshine School for cerebral palsied children. Horn and Mortland, architects, which appeared on pp. 156–161 of the September 1952 issue of the RECORD.

• Still abroad with the RECORD: The residence for Mr. and Mrs. John J. Taylor in New Orleans, Curtis & Davis, architects, is pictured and discussed in the March 14 issue of the Dutch magazine, *Bouw*. The house originally appeared in the RECORD's October 1952 issue, pp. 174–178. The March 7 issue of this magazine featured the Raleigh, North Carolina, State Fair Pavilion by the late Matthew Nowicki and William H. Deitrick, Severud-Elstad-Kruger, consulting engineers, which was featured in a construction story in *Architectural Forum*.

(*More news on page 324*)

WEBSTER DYNETIC* GAS BURNER

Forced Draft



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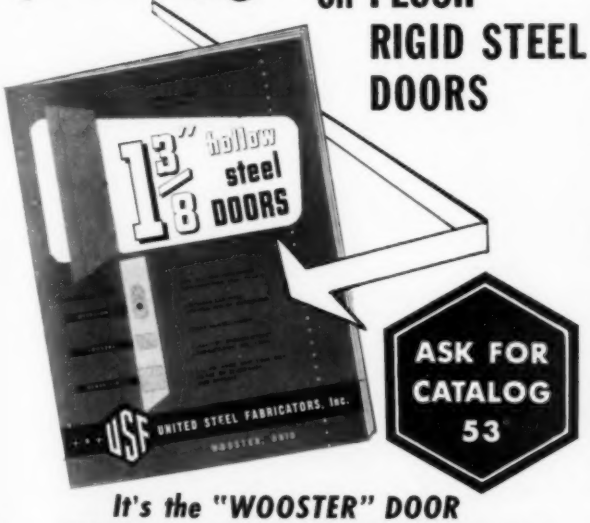

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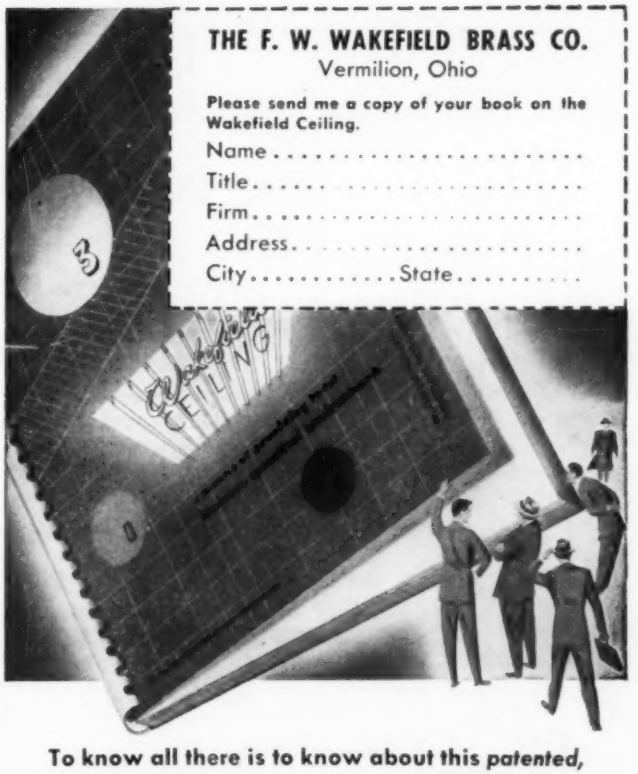

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THE RECORD REPORTS

(*Continued from page 322*)

AMERICANS SEE EXHIBIT "DESIGN FROM BRITAIN"

For the first time in several years, many Americans will have a chance to see what their British cousins are doing in the way of contemporary design. An exhibition, "Design from Britain," organized by the Council of Industrial Design in London, is now on a nationwide tour. The exhibit opened March 19 at the Institute of Contemporary Arts in Washington and is circulated by the Smithsonian Institution's Traveling Exhibition Service.

Included in the exhibit are approximately 185 examples of current British work, chosen from such fields as pottery, silverware, fabrics, lamps, wallpaper and furniture. A selection of Coronation souvenirs will also be shown.

After being shown in Memphis, the exhibit will visit Chicago, Bloomfield Hills, Mich., Minneapolis, Toledo and Louisville, with a tentative date set for next year at the San Francisco Museum of Art.

Robin Day was the designer of the table, chair and drawer unit above. The V-legs are for both strength and easy stacking

Above: a dining chair designed by Ernest Race, the frame of plywood and gray-enamelled cast aluminum. Below, grandmother's favorite in a contemporary idiom, another Race design, this rocking chair is fashioned of wrought iron

(*More news on page 328*)

ORTHO RESEARCH FOUNDATION
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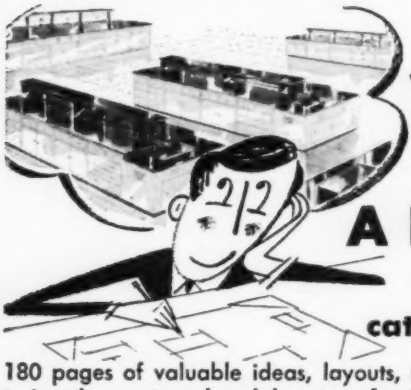

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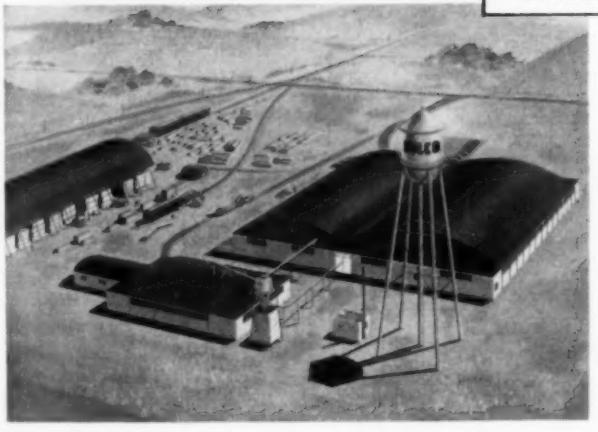

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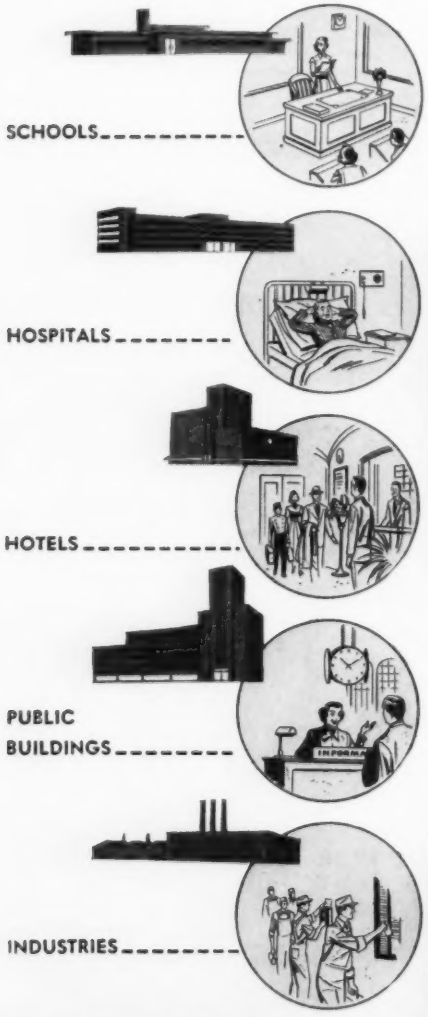

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THE RECORD REPORTS

(*Continued from page 324*)

P.C. OFFERS ARCHITECTS FACTS ABOUT PRODUCTS

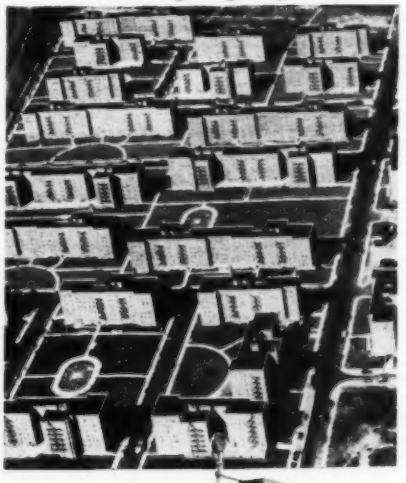
Another of the informational meetings being sponsored around the country by the 33 chapters of Producers' Council was held recently in Atlanta, with more than 150 representatives of Council members and guest architects in attendance.

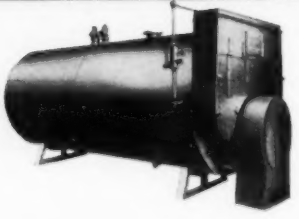
The program included a social hour, dinner and an hour's presentation on products of the Reynolds Metals Company of Louisville, Ky.

Displays and product samples were utilized by the Reynolds speakers from Louisville, headed by W. S. Acuff Jr., sales manager of Industrial Products. K. G. Peck, Industrial Products manager, discussed roofing, roof decks, siding and curtain walls; and M. F. Rees, acoustical ceiling manager, described Reynolds' insulated acoustical systems. The speakers were introduced by H. E. Hicks, Atlanta, regional manager of the Reynolds Building Products Division.

At speakers' table: W. S. Acuff Jr.; J. M. Fowler, Armstrong Cork Co., Atlanta P.C. president; H. E. Hicks; P. C. Field Director Russell Jamieson; Georgia A.I.A. President Edward Moulthrop. Below: Messrs. Fowler, Acuff, Jamieson and Moulthrop snapped during the social hour preceding the meeting

31
TITUSVILLE
SCOTCH MARINE
BOILERS
efficiently serve this large new Brooklyn project





Jarcho Brothers, heating contractors on the Trump Apts., Beach Haven, Brooklyn, selected 31 Titusville SOH-121 Boilers to handle the housing project's heating requirements. ● One or many, TITUSVILLE Boilers can best meet *your* heating needs!

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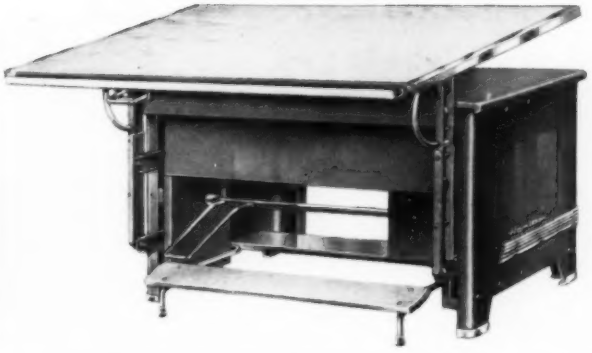

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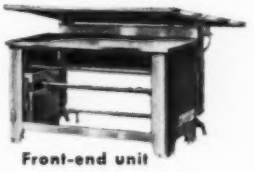
Front-end unit

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Fig. 1. Nine story, all-welded *framework for Veterans Administration Hospital, Minneapolis, Minnesota. Contractors, J. D. Hedin Construction Co., Inc., Washington, D. C. Architects, Veterans Administration Construction Service. Structural Engineer, R. A. Phelps, St. Paul, Minn.*

SAVES $22,000 OVER RIVETING

Full structural continuity achieved through arc welding has saved 1.68 pounds of steel per square foot on this 87,000 square foot process warehouse. At $0.15 per pound for fabricated steel, this saving amounts to $22,000 over the cost for steel alone if riveted design had been used. The unit cost is only $3.58 per square foot, considered exceptional for a completely equipped process building including utilities, refrigeration, air conditioning, etc.

Fig. 2. Process warehouse *for the Hale-Halsell Grocery Co., Tulsa, Oklahoma. Size 250' x 350' with 16' clear height. Contractor: Tulsa Rig and Reel and Manufacturing Co. Consulting Engineer: David R. Graham & Associates, Tulsa, Oklahoma.*

HOW TO DESIGN ARC WELDED STRUCTURES

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THE RECORD REPORTS

Wright

(Continued from page 12)

idea of architecture we are to be reduced by expediency to an international style by the factotum; if a fashion is all we are worth as a civilization, let's go back to barbarism. It is far more richly humane. . . .

. . . All collectivism such as an international style tends to diminish the human soul because it relieves the individual of a developed conscience therefore takes from him the reward of being *true to himself as himself.*

This reward of Individuality has been the Star of Creation since time immemorial.

That star cannot set for America in any standardized style.

NEW FINE ARTS LIBRARY

The Department of Architecture and Art of the Chicago branch of the University of Illinois has just acquired its own fine arts divisional library, including nearly 6000 volumes, more than 7000 slides and clipping files, pamphlets and manufacturers' literature in the architectural field. The fine arts collection until now had shared space in the main library of the Chicago branch.

Several Chicago architectural firms have contributed to the collection — 1200 volumes were given in memory of Col. John A. Holabird, late senior partner of the firm of Holabird and Root and Burgee; several hundred volumes have been received from the estate of Arthur Woltersdorf; and two groups, rich in periodical files, were given by John L. Hamilton and Howard Shaw. Landscape architecture and planning materials were contributed by Edward H. Bennett Jr.

ARCHITECTURAL INDEX

The Architectural Index for 1952, a key to the contents of six periodicals, is available in brochure form from Ervin J. Bell, Editor, at 5532 South Kenwood Avenue, Chicago 37, Ill., at three dollars a copy. Periodicals indexed are *Arts and Architecture, Architectural Forum,* ARCHITECTURAL RECORD, *House and Home, Progressive Architecture* and *Interiors.*

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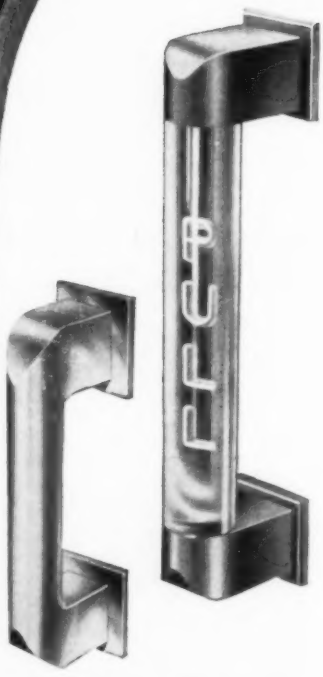

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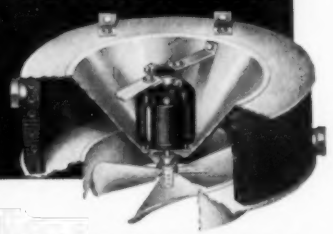

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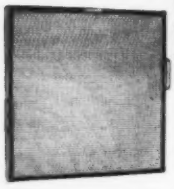

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REQUIRED READING

(*Continued from page 48*)

scriptions of houses they may not have and may never see. Professor Newcomb's book is, according to his preface, aimed at the public rather than at the specialist, and while it cannot be fairly said that the descriptions of individual houses are either pedantic or overly involved in themselves, the cumulative effect of several such descriptions in an uninterrupted series makes for pretty tough reading for a layman. From another point of view, too, it might be better to have the descriptions more proximate to the plates to which they refer. As it is, the reader finds himself turning tediously back and forth, from the text to the separate illustrative section, to see what is being talked about in the descriptions.

But, again, this is a general rather than a particular fault in such writing, and notwithstanding it, Professor Newcomb has performed a real service in writing this book. The job he has done does not fail to do justice to the material. The photographs are good, for the most part, although some suffer from casual cropping and less-than-ideal reproduction. One could have wished that some additional buildings had been included in the pictorial section, but probably no book of this sort has ever appeared without someone wishing in such wise.

There is one major disappointment connected with Professor Newcomb's book — an unavoidable one for which he is no way responsible. This concerns the disappointing quality of almost all the recent buildings included. As the author kindly puts it, "modernism has, as yet, found few protagonists in Kentucky." This is certainly a piece of understatement, and cannot be explained or justified as simply as he suggests — on the grounds that the state's history makes its conservatism in architecture a thing to be expected. Kentucky's lack of awareness in architecture today is only one part of a general cultural timidity. At any rate, if anyone thinks that all the battles for modern have been won, let him be served notice that the dark and bloody ground could use a few pioneers.

BALTIMORE'S ARCHITECTURAL HERITAGE

The Architecture of Baltimore — A Pictorial History. By Richard H. Howland and Eleanor P. Spencer. The Johns Hopkins Press (Baltimore 18, Maryland) 1953. 8½ by 11¼ in. 149 pp., illus.

Documentation of American architecture of the eighteenth and nineteenth

(*Continued on page 340*)

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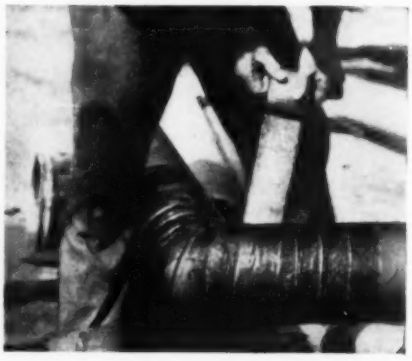

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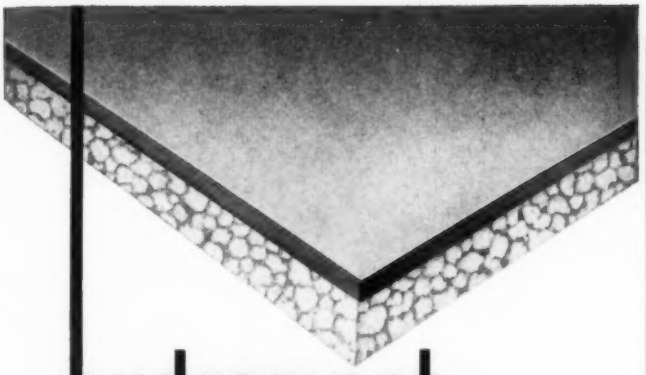

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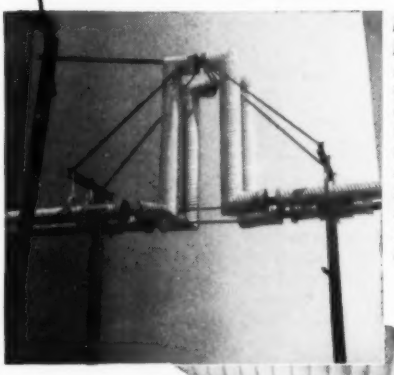

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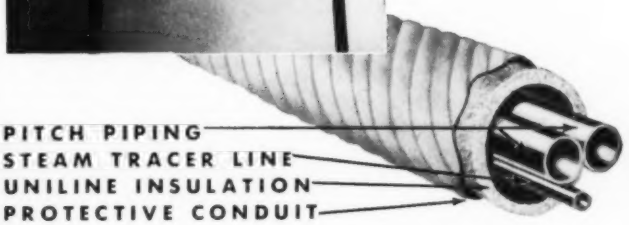

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†Ratio of non-weatherstripped to weatherstripped par-infiltration.

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(*Continued from page 336*)

One of 12 houses called Waterloo Row designed in 1815 by Robert Mills. Illustration from "The Architecture of Baltimore"

centuries is progressing by leaps and bounds these days with the many current books on particular regions or cities. This particular book is a very attractive one, and gives an excellent review of Baltimore's building history. The book, originally conceived as a pamphlet to accompany a recent Peale Museum exhibition on the architecture of Baltimore, was expanded to include a broad coverage of the period from about 1764 to 1892, with 108 plates selected by the general editor, Wilbur H. Hunter.

The value and weakness of such a book as an architectural history are clearly pointed out in the introduction by Henry-Russell Hitchcock: "The more impartial and less period-focussed investigations of the total building production of limited regions or of individual cities provide ballast in the total picture of our architectural past, a ballast particularly needed for the last century. Iron-clad patterns of stylistic succession . . . or the tendency to see history as a mere succession of 'great men' and their followers, can never be corrected by a single study such as this admirable one of Baltimore." Herbert L. Smith, Jr.

(*Continued on page 344*)

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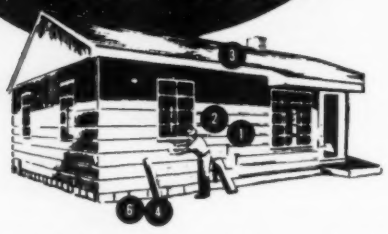

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(*Continued from page 340*)

SPECIFICATION INDEX

Specification Index of Construction Items and Materials. By Allen V. Rothermel. Revised Edition. 1953. 8 by 11 in., 102 pp.

This is a revised edition of Allen V. Rothermel's Specification Index first published in 1949 to acquaint technical men with available specifications of national significance to those in the fields of architecture and engineering. Included in the bibliography are specifications of the American Society for Testing Materials, American Standards Association, Army and Navy Specifications, Commercial Standards, Federal Specifications, Simplified Practice Recommendations, and publications of over 40 associations and institutes.

These non-profit groups, which sponsor research programs designed to reduce manufacturing and distribution costs by standardization and simplification, have been selected as a reliable guide for rigid specifications.

To aid in the process of obtaining specifications, a table at the beginning of the booklet lists abbreviations and addresses for some sixty organizations, as well as addresses for ten General Service Administration regional offices. The specification index lists the items alphabetically and supplies A.S.T.M. designation, Federal symbol, A.S.A. standard, and miscellaneous specifications, notes and publications. Items are cross-referenced according to the significant word in the title.

This handy, revised edition of the index should be a particularly valuable aid for the specification writer, one which should save him, as the author states, "a lot of time and temper" in tracking down standard specifications. E. B.

BOOKS RECEIVED

Antiques at Williamsburg. By the Editors of Antiques Magazine. Hastings House, Publishers (41 East 50th St., New York 2, N. Y.) 1953. 10 by 12½ in., illus.

The Architect in Practice. By Arthur J. Willis and W. N. B. George. Crosby Lockwood & Son, Ltd. (39 Thurloe St., London SW-7, England) 1952. 5¾ by 8¾ in. 260 pp.

Architects' Detail Sheets. A Series of 96 Selected Sheets. Edited by Edward D. Mills. Published for the Architect and Building News. Iliffe and Sons, Limited (London, England) 1952. 9 by 11¾ in. 228 pp., illus.

(*Continued on page 348*)

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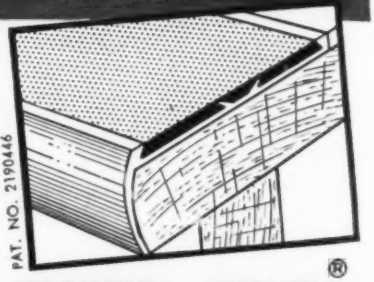

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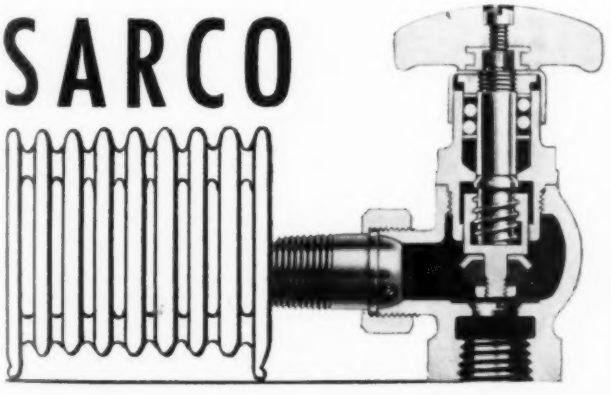

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Atmospheric Pollution. Its Origins and Prevention. By A. R. Meetham. Pergamon Ltd. (London, England) 1952. 5½ by 8¾ in. 268 pp., illus.

Community Plan for Industrial Survival. A Study for the National Security Resource Board. By the San Francisco Bay Area Committee on Post-Attack Industrial Rehabilitation. 1952. 8½ by 10¾ in. 92 pp.

Design in Town and Village. By Thomas Sharp, Frederick Gibberd and W. G. Holford. Ministry of Housing and Local Government. Her Majesty's Stationery Office. (London, England) 1953. 7¼ by 9½ in. 120 pp., illus.

Estimating Construction Costs. By R. L. Pueriſoy. McGraw-Hill Book Company. (330 West 42nd St., New York 36, N. Y.) 6¼ by 9½ in. 315 pp., illus.

The Legendary Mizners. By Alva Johnston. Farrar, Straus and Young. (101 Fifth Ave., New York 3, N. Y.) 1953. 5½ by 8 in. 304 pp., illus.

Masterpieces of Furniture in Photographs and Measured Drawings. By Verna Cook Salomonsky. Dover Publications, Inc. (1780 Broadway, New York 19, N. Y.) 1953. 8 by 11 in. 101 plates.

New Design in Exhibitions. By Richard P. Lohse. Erlenbach (Zurich, Switzerland). 9½ by 11½ in. 260 pp., illus.

New Rooms for Old. By Henry Lionel Williams and Ottalie K. Williams. Harper & Brothers, Publishers (49 East 33rd St., New York, N. Y.) 1953. 6 by 8¾ in. 255 pp., illus.

The Principles of Line Illustration. By L. N. Staniland. Harvard University Press (Cambridge, Mass.) 1953. 5¾ by 8½ in. 212 pp., illus.

Procedure Handbook of Arc Welding Design and Practice. The Lincoln Electric Company (Cleveland 17, Ohio) 1950. 6 by 9 in. 1200 pp., illus.

The Streets of Old New York. By J. Ernest Brierly. Hastings House, Publishers. (41 E. 50th St., New York, N. Y.) 5½ by 8½ in. 127 pp., illus.

The Structural Analysis of the Dome of Discovery. By T. O. Lazarides. Crosby Lockwood & Sons, Ltd. (39 Thurloe St. London S W-7, England) 1952. 7½ by 10 in. 64 pp., illus.

A Television Policy for Education. Edited by Carroll V. Newsom. American Council on Education. (Washington, D. C.) 1952. 6¼ by 9¼ in. 266 pp., illus.

This Too Is Natchez. By Nola Nance Oliver. Hastings House Publishers (41 E. 50th St., New York, N. Y.) 1953. 6¼ by 8¼ in. illus.

World's Contemporary Architecture. Edited by Yuichi Ino and Shinji Koike. The Shokokusha Publishing Co., Inc. (11–2 Chome, Hirakawa-cho, Chiyoda-Ku, Tokyo, Japan) 1953. 8½ by 12 in. 94 pp., illus.

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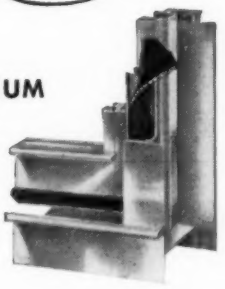

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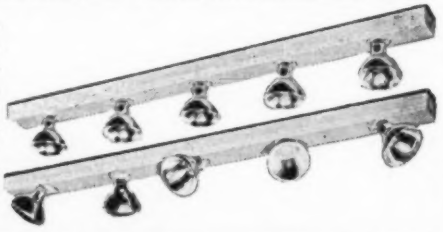

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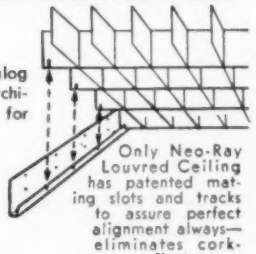

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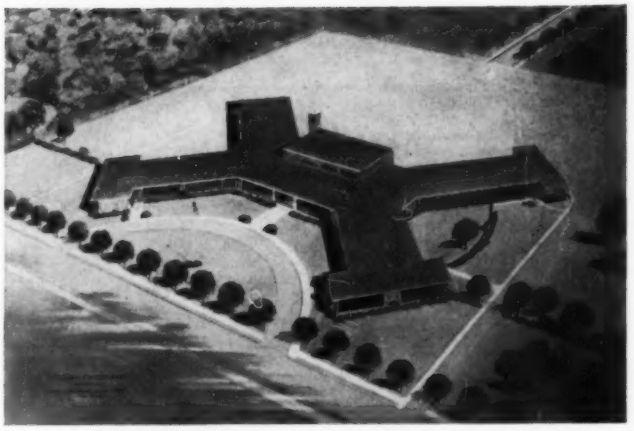

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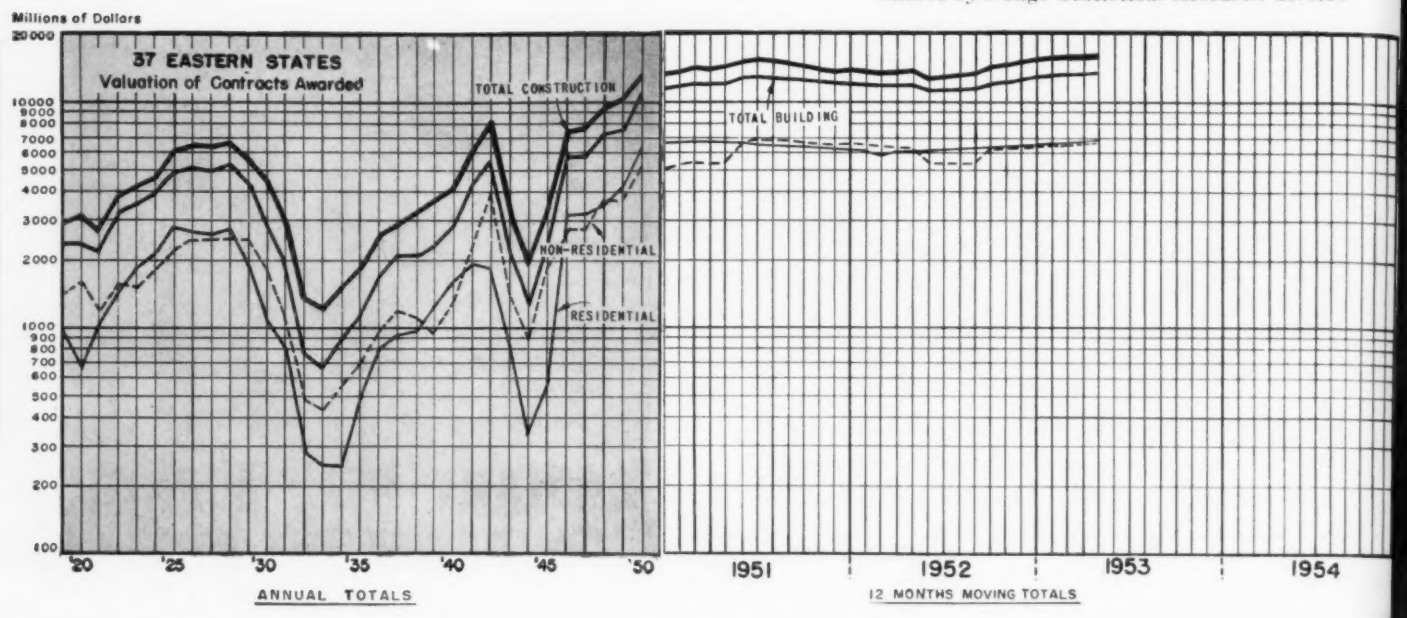
City.....Zone.....State.....

CURRENT TRENDS IN CONSTRUCTION

Charts by Dodge Statistical Research Service



TREND CONTINUES HIGH

Construction activity in the United States continues at a record high level and is running well ahead of 1952. Contract awards in April as reported by F. W. Dodge Corporation were up 9 per cent over '52; this brought the total for the first four months of this year to 10 per cent above '52, with gains registered in all major construction groups.

The sharpest increase was in nonresidential work which was running 13 per cent ahead (in contract dollar value) of '52. This reflected, however, the inclusion of portions of large Atomic Energy Commission projects which materially raised the industrial building category.

Dollar value of residential building contracts for the first four months held at 7 per cent ahead of last year although there was a slight dip in April. Earlier estimates of a million-home year seemed likely to be fulfilled.

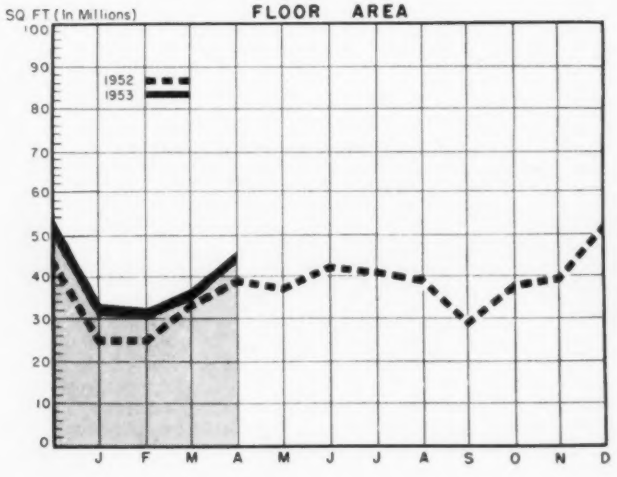
The four-month total of Dodge Reports of contracts awarded in the 37 eastern states was $5,186,238,000, up 10 per cent. The nonresidential four-month total was $1,910,740,000, up 13 per cent; residential, $2,157,691,000, up 7 per cent; heavy engineering, $1,117,807,000, up 10 per cent.

Educational building contracts were also setting new highs. Regional comparisons are shown in the table below.

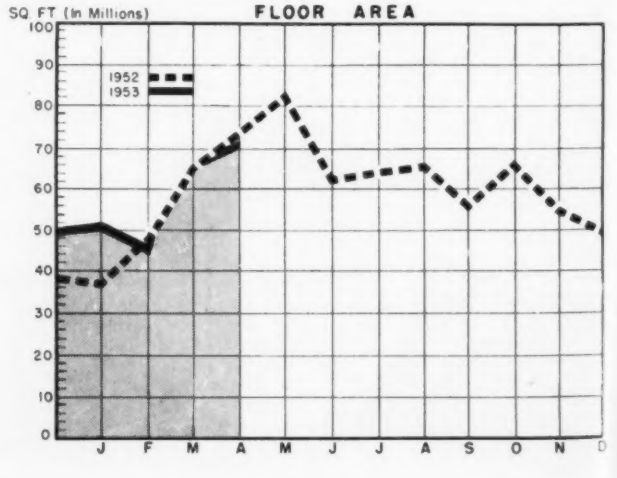
EDUCATIONAL & SCIENCE BUILDINGS—REGIONAL COMPARISON
Contract Awards—Thousands of Dollars (37 Eastern States)
First four months 1953—1952

Region	1953	1952	Region	1953	1952
37 East. states	479,238	455,353	Cincinnati	19,404	9121
New England	36,074	28,918	So. Michigan	20,693	24,120
Metropolitan			Chicago	47,240	53,953
N. Y.	44,906	78,033	St. Louis	18,255	18,968
Upstate N. Y.	33,547	20,701	New Orleans	8757	15,070
Middle Atlantic	64,422	60,837	Minneapolis	16,753	18,431
Southeastern	60,884	38,231	Kansas City	27,930	25,206
Pittsburgh	19,854	11,860	Texas	31,075	23,414
Cleveland	29,444	28,490			

NONRESIDENTIAL BUILDING (37 EASTERN STATES)



RESIDENTIAL BUILDING (37 EASTERN STATES)



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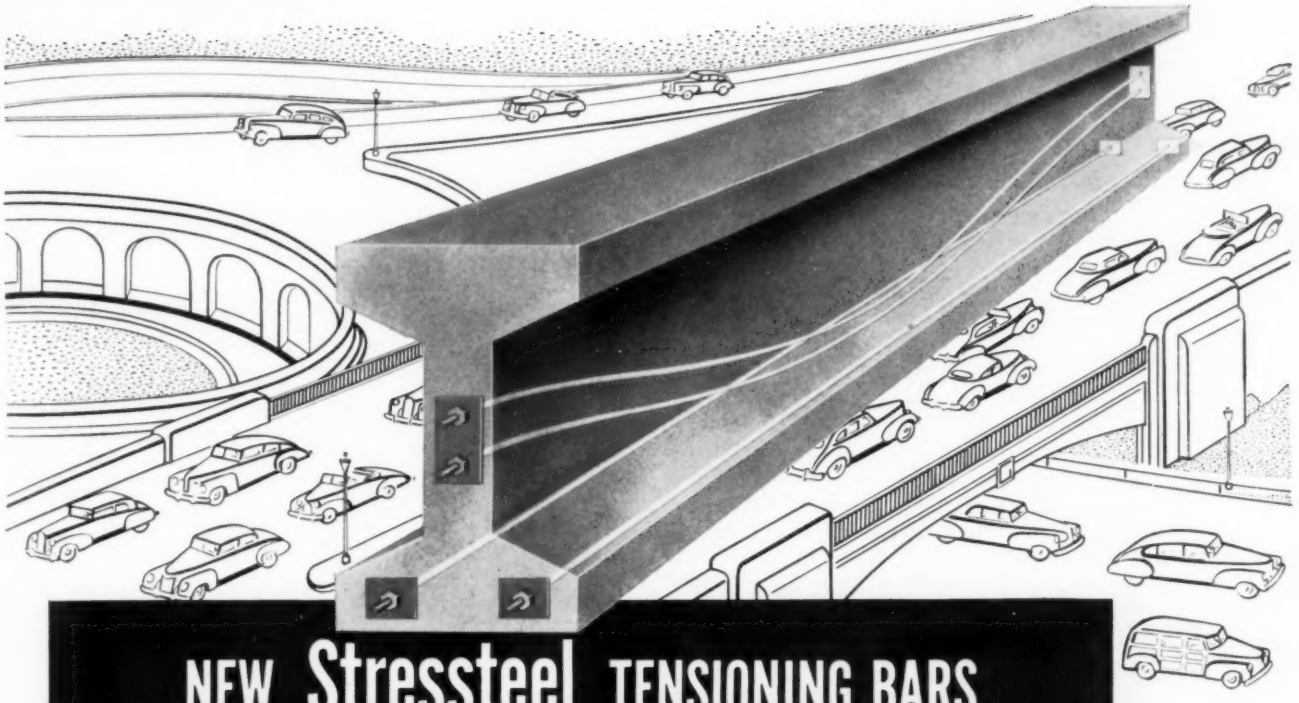

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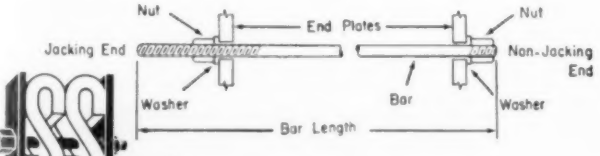

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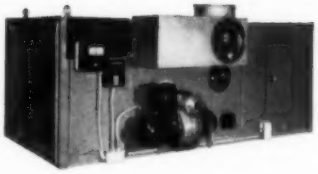

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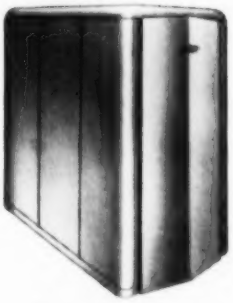

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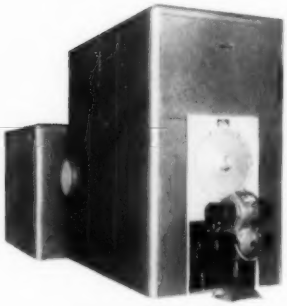

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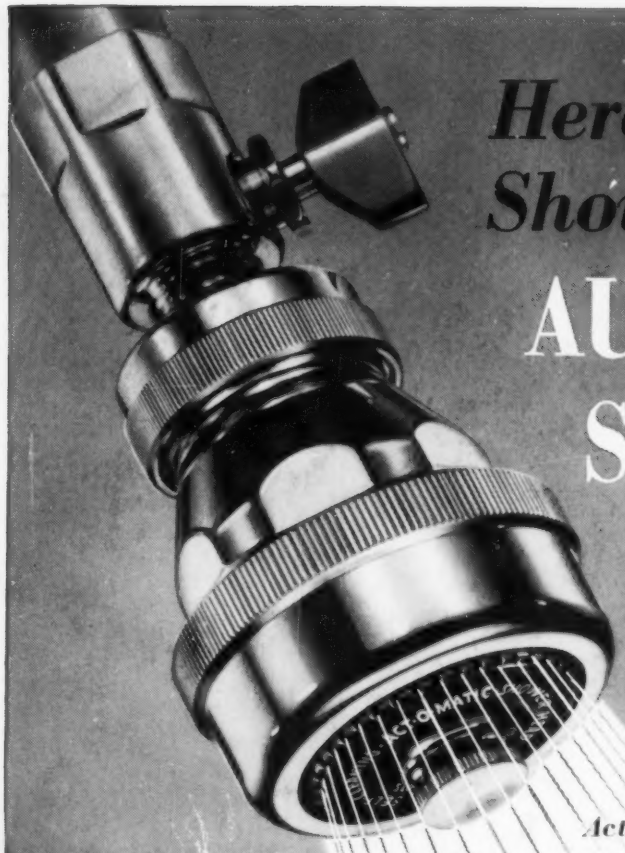

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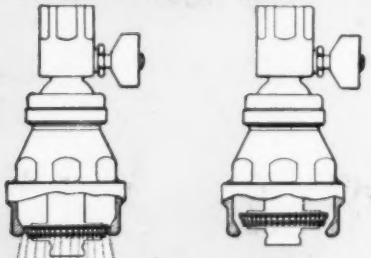

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